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MONTHLY BULLETIN

OF

AGRICULTURAL ECONOMICS AND SOCIOLOGY

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STUDIES ON THE INTERNATIONAL MARKET FOR AGRICULTURAL PRODUCTS

I. — Costs and Prices: the Evolution of the Market for Commercial Fertilisers.

An attempt, such as is contemplated in this article, to embark upon the comprehensive subject of arable cultivation and to deal with the economic aspect of the utilisation for crops of commercial fertilisers, must necessarily encounter very considerable limitations. On the one hand it is obviously impossible to treat so vast a subject in full detail on an international basis, more especially if, as is proposed, interaction of costs and prices is taken as the essential factor of the economic processes. On the other hand, statistical information comparable from the international standpoint is available only to a limited extent, and accordingly the range of this attempt is still further restricted.

A special study has been made of the development of the world market in nitrogenous substances, that is, since its beginnings up to 1932, in all some 100 years or more, with a view to collecting all material relevant to our subject. Moreover the course of this development and the elucidation of the great changes that have taken place in this market come within the scope of this article and merit the most careful attention. The facts are known; it will be the endeavour of the writer to establish the causes of these remarkable changes. The investigation has been in part suggested by the work by Walter Eucken entitled *Die Stickstoffversorgung der Welt* which appeared in 1921. In this the author briefly outlines the influence exercised up to the war time by cotton prices in the United States and beet sugar prices in Europe, and especially in Germany, on the price formation of Chile Salpetre, an important nitrogenous manure. He draws the attention of the reader to the initial competition between Chile salpetre, or sodium nitrate, and ammonium sulphate, and indicates as the successful rivals of sodium nitrate, which formerly governed the nitrogen market, the synthetic nitrates, particularly the Leuna-salpetre.

It is for this reason that in the respective sections of this article an endeavour has been made to investigate the relations existing between the prices of sodium nitrate and its rivals on the one hand, and on the other certain important products such as North American cotton and European, especially German, beet sugar. It has proved possible to establish the noticeable influence exercised on the prices of the means of production and on their quantitative con-

sumption, by the prices of the products or by the extent of their production. In these sections it has been possible to illustrate by the statistics the causes of the generally known revolutions that have occurred on the world nitrate market.

In view of space considerations, no account has been given of the undoubtedly very interesting phenomena of competition between the various phosphatic manures. This omission is of less importance, since the principal representatives of this class of fertilisers, namely, basic slag which is very slowly soluble and superphosphate which is rapidly soluble, are often complementary in their application. During the first ten years after the appearance of superphosphate there does seem however to have been a certain competition.

On the market of potassic fertilisers changes of the kind indicated have not occurred, although the manufacture of new potassic compounds and the suppression at the close of the war of the German monopoly did to a certain extent affect this market.

The same considerations will also prevent discussion of the vegetable and animal nitrogenous manures, as for example came into use in Japan before the war. In that country there was a large direct utilisation as fertiliser of the oilseeds of soya, cotton and colza. The same procedure was adopted also in the United States of America, where in particular cottonseed meal was used for direct fertilising purposes, as well as meat meal, fish meal, dried blood and concentrated meat meal. Especially in the United States however even before the war, owing to the high prices of these nitrogen carriers, their use as fertilisers tended to be replaced increasingly by utilisation as concentrated feeding stuffs. In some of the cotton growing States cottonseed is none the less even at the present day employed as a fertiliser.

In establishing international comparisons of the exchange values of the products of arable farming, the discussion is confined to the most important breadstuff cereal, wheat, and to oats, while in respect to the fertilisers, in consequence of the absence of statistics in certain countries, the field is somewhat narrowed. These restrictions are to be regretted but are unavoidable. At the same time the material available does permit of valuable surveys and comparisons.

Neglecting the usual unilateral method of considering prices, and attacking instead the interaction of costs and prices, it is possible to reach conclusions which could not otherwise be drawn and some new insight may thus be gained into the economic conditions which govern this sphere.

I.

Although it is essential to treat the material with the utmost thoroughness, so as to trace out from the respective series of figures the facts and their connections, we are obliged to be content, in view of the admitted absence of statistical data of the more remote period, with data for those times that will be regarded from the modern standpoint as somewhat primitive in type. It is however quite

practicable even from these data to fill out the picture of the whole course of the development.

Thus for any general view of the period from 1830 to 1912, production statistics relating to products and means of production are all that can be obtained. As shown in Table I these items are sufficient to establish that the production of sodium nitrate, as the principal nitrogenous fertiliser of the pre-war times, and the production of cotton in the United States of America as well as the production of beet sugar in the world show during this long period a similar rising tendency.

TABLE I.

Average of the years	1 Nitrate of soda production in million kgs.	2 Cotton production of United States in 1000 bales (500 lb.)	3 Beet sugar production of the world in 1000 tons	4 Wheat production of Europe incl. Russia million tons
1830-34	16	849	—	—
1860-64	321	2,135	(1) 527	—
1890-94	985	8,324	(2) 3,920	38.37
1896-1900	1,288	10,105	4,980	40.86
1901-03	1,373	10,183	5,843	48.03
1904-06	1,660	12,576	6,096	35.37
1907-09	1,973	11,715	6,323	34.97
1910-12	2,516	14,055	7,523	39.53

(1) 1864-65. - (2) 1891-95.

As will be seen the average of the years 1830-34 shows a production of sodium nitrate of 16,000,000 kg. and a production, in the United States of America, of 849,000 bales (of 500 lb.) of cotton. In 1890-94, or sixty years later, the average production of sodium nitrate was 985,000,000 kg. and that of cotton in the United States was 8,324,000 bales (of 500 lb.); from 1901 to 1903, production of sodium nitrate reached an average of 1,373,000,000 kg. and that of cotton in the U. S. A. 10,183,000 bales; finally from 1910 to 1912, the average production of sodium nitrate rose to 2,516,000,000 kg. and that of cotton in the U. S. A. to 14,055,000 bales.

The course of the world production of beet sugar is similar. As compared with the output of sodium nitrate of 985,000,000 kg. for the average of the years 1890-94, the average world production in years 1891-95 of beet sugar was 3,920,000 m. tons; for 1904-06 to an average output of sodium nitrate of 1,660,000,000 kg. there corresponds a world beet sugar production of 6,096,000 m. tons, and for the average of the years 1910-12 to a production of sodium nitrate of 2,516,000,000 kg. there corresponds one of world beet sugar of 7,523,000 tons.

In contrast to this parallel development of the production of sodium nitrate on the one hand, and of that of cotton in the United States and of the world pro-

cuction of beet sugar on the other, the production of wheat in Europe, including Russia, showed a tendency to decline. From the quinquennial average of 1890-94 to that of 1901-03, the curve, alike for wheat production and for that of sodium nitrate, is an ascending one, but for the average 1904-06 that for wheat had already dropped, while that for the production of sodium nitrate was still rising, and the same was the case in the years 1907-09. The wheat production curve again showed a rise in 1910-12, but a slight one only, reaching the position of 1890-94, while the sodium nitrate average output for 1910-12 was almost 2½ times as large as the average of 1890-94.

Although it must of course be realised that the comparison here instituted of the production data does not provide a complete proof of an actual interdependence of the two crop products, cotton and beet sugar, on the one hand, and sodium nitrate production on the other, it may none the less be admitted, in virtue of data still to be adduced which may render possible more precise conclusions, the establishment of such a dependence will be shown to be probable. The same holds good in respect of the divergent tendency shown by the production data of wheat and sodium nitrate.

II.

For the next twenty-year period, from 1913-32, it is possible to obtain precise data. In Table II the successive items are shown in comparison and the three-year moving averages are calculated.

Before giving the table we give a fuller statement of the contents of the columns than can be given in the headings.

Column 1. — Aggregate area of sugar beet cultivation in the 14 main producing countries of the world; for the period 1909 to 1913 this area represented 98.30 per cent. and in 1932, 92.63 per cent. of the whole area under sugar beet cultivation in the world, apart from Russia. The following are the sugar beet growing countries included: Germany, Austria, Belgium, Denmark, Spain, France, Great Britain, Hungary, Italy, Netherlands, Poland, Sweden, Czechoslovakia, and the United States of America. Russia had to be left out of count, owing to the absence of data relating to the consumption of artificial manures.

Column 2. — Area under cotton in the United States of America.

Column 3. — Utilisation of artificial manures, apart from raw phosphates, in the 14 countries enumerated.

Column 4. — Aggregate area under wheat cultivation in 13 of the countries as above, omitting the United States. This latter country is not taken into consideration, because the area under wheat is nearly as large as that of the other 13 countries taken together, and because the normal fluctuations in American conditions would have so greatly modified the general survey that erroneous conclusions might easily have been drawn as to the development of production. In fact the uniform increase shown in column 4 of the wheat area of the 13 European countries — very remarkable as between the periods 1917

TABLE II.

Moving 3 year Averages	1 Areas under sugar beet cultivation (14 countries) in 1000 ha.	2 Areas under cotton in the U. S. A. in 1000 ha.	3 Consumption of commercial fertilisers (excl. raw phosphate) (14 countries) million quintals	4 Areas under wheat in 13 countries in 1000 ha	5 Areas under wheat in the United States of America 1000 ha.	6 Consumption of commercial fertilisers (excl. raw phosphate) in U. S. A. million quintals	7 Nitrogenous fertiliser consumption of U. S. A. million quintals	8 Consumption of commercial fertilisers (excl. raw phosphate) in Germany million quintals	9 Nitrogenous fertiliser consumption in Germany million quintals	10 Areas under sugar beet cultivation in Germany 1000 ha.	11 Areas under wheat in Germany 1000 ha.
1913-15	1,499.10	14,209	154.30	22,330	22,149	47.83	9.59	40.97	8.16	481.33	1,991
1914-16	1,310.23	13,925	134.68	20,494	22,437	49.44	11.54	35.23	6.33	437.17	1,894
1915-17	1,166.27	13,522	135.81	18,464	21,297	55.28	14.85	37.61	7.43	383.13	1,734
1916-18	1,131.13	14,142	143.98	16,749	21,123	67.11	18.63	30.93	8.94	383.80	1,570
1917-19	1,131.47	13,950	135.82	16,528	24,277	59.66	16.35	30 78	8.21	350.97	1,442
1918-20	1,229.67	14,225	152.66	17,496	26,442	65.84	16.16	26.54	7.77	331.33	1,395
1919-21	1,364.80	13,607	154.00	18,544	27,051	56.26	10.81	26.96	8.07	339.00	1,372
1920-22	1,445.90	13,535	170.90	19,627	25,247	59.32	11.02	35.19	11.06	377.47	1,397
1921-23	1,511.50	13,703	158.51	20,054	25,045	44.18	9.35	35.04	12.01	396.73	1,431
1922-24	1,692.15	15,043	171.94	20,117	23,539	45.30	12.30	36.20	12.82	398.37	1,439
1923-25	1,835.37	16,799	188.36	20,387	22,182	48.35	15.10	37.94	12.75	393.63	1,499
1924-26	1,896.03	18,144	204.33	20,634	21,735	45.34	15.65	46.70	14.74	400.10	1,540
1925-27	1,887.60	17,979	213.29	21,142	22,578	40.96	15.31	52.77	16.65	413.33	1,634
1926-28	1,941.53	17,883	218.05	21,306	23,390	34.36	15.45	56.79	18.84	430.47	1,693
1927-29	2,027.57	17,364	229.15	21,345	24,332	33.50	16.31	60.33	19.78	447.97	1,692
1928-30	2,061.90	17,677	228.47	21,476	24,855	31.94	16.12	61.24	19.91	464.27	1,703
1929-31	1,998.10	16,782	210.52	21,812	24,697	28.47	13.84	57.67	18.61	439.77	1,849
1930-32	1,859.97	15,796	182.08	22,353	23 872	22.16	10.30	53.73	17.71	378.23	2.076

1919 and 1930-32, the increase being from about 16.500,000 ha. to 22,400,000 ha. over those years — would be completely masked by the great fluctuations in the wheat areas of the United States. The area under wheat in the States, for example, between the period 1916-18 to 1919-21 increased from 21,123,000 ha. to 27,051,000 ha. and then declined till in 1924-26 it stood at 21,735,000 ha. The fluctuations of the last few years would equally affect the general survey.

Column 5. — Area under wheat in the United States of America.

Column 6. — Consumption of commercial fertilisers, apart from raw phosphates, in the United States.

Column 7. — Consumption of nitrogenous fertilisers in the United States.

Column 8. — Consumption of commercial fertilisers, apart from raw phosphates, in Germany.

Column 9. - Consumption of nitrogenous fertilisers in Germany.

Column 10. — Area under sugar beet cultivation in Germany.

Column 11. — Area under wheat in Germany.

There may now be compared the variations in the sugar beet areas of the 14 countries (Column 1), in the areas under cotton in the United States (Col. 2) and in the utilisation of commercial fertilisers in the 14 countries (Col. 3), for the twenty years 1913-15 to 1930-32.

In the first place the period 1916-18 is to be noted as a turning point, the area under sugar beet in the 14 countries declining from 1,499,100 ha. in 1913-1915 to 1,131,130 ha. for 1916-18, and increasing again subsequently. A similar movement may be noted in the utilisation of commercial fertilisers in these countries. This consumption in 1913-15 amounted to 154,300,000 quintals and in 1916-18 to 143,980,000 quintals and thus also showed a decline, although, as is seen from the Table, the average was somewhat higher for 1916-18 than it was either for 1914-16, 1915-17 or for 1917-19. These variations seem to have been due to the American cotton growing, which, as Column 2 shows, decreased from 1913-15 to 1915-17, in 1916-18 again almost reached the extent of 1913-15, only again somewhat to diminish for 1917-19. It may also be noted that the consumption of commercial fertilisers (Column 3) from 1917-19 to 1928-1930 shows a fairly uniform tendency to increase interrupted only in the period 1921-23. The decline, however, in 1921-23 is not to be attributed, as is clear from Column 1, to any diminution of the area under sugar beet, nor (Column 2) to any reduction in the cotton area in the United States. On the other hand it was occasioned, as may be seen from the figures of the consumption of commercial fertilisers in the United States, by a marked shrinkage of this consumption in that country. In fact, while in the 14 countries taken together for the period 1920-22 to 1921-23 the reduction in consumption amounted to 12,000,000 quintals, that in the United States alone amounted to nearly 15,000,000 quintals. In this case there must be details involved which escape investigation,

here at least, for as appears from the subsequent Table V (Columns 1-5) the fact is not to be attributed to any large price changes.

In 1928-30 a particularly striking change took place. As average for those years there was in the 14 countries taken together an area of sugar beet cultivation of 2,061,900 ha., representing a maximum, and a consumption of commercial fertilisers of 228,470,000 quintals (Column 3), another maximum, and furthermore in the United States a maximum area under cotton of 17,677,000 ha. From 1928-30 to 1930-32 the average area under sugar beet in the 14 countries concerned decreased from 2,061,900 ha. to 1,859,970 ha. the area under cotton in the States from 17,677,000 ha. to 15,796,000 ha. and the utilisation of commercial manures in the 14 countries from 228,470,000 quintals to 182,080,000 quintals.

The relation appears also to be very clear between cotton growing and fertiliser consumption in the United States alone. In this country, the area under cotton (Column 2) decreased as between 1928-30 to 1930-32, as already stated, from an average of 17,677,000 ha. to 15,796,000 ha., the commercial fertiliser consumption (Column 6) from 31,940,000 quintals to 22,160,000 quintals and the consumption of nitrogenous fertiliser as such (Column 7) from 16,120,000 quintals, to 10,300,000 quintals.

Still more clear are the relations in Germany between sugar beet growing and the consumption of commercial fertilisers in the twenty year period between the average of 1913-15 and that of 1930-32 (Columns 8, 9, and 10). During this period the smallest area under sugar beet in Germany was the average for 1918-20 with 331,330 ha. (Column 10) and for the same period the average consumption of commercial fertilisers was also lowest, 26,540,000 quintals, as well as that of nitrogenous manures with 7,770,000 quintals. For the critical years 1928-30 the maxima were reached of 464,270 ha. for sugar beet cultivation, 61,240,000 quintals of commercial fertilisers and 19,910,000 quintals of nitrogenous manures. The averages for 1930-32 fall sharply to 378,230 ha. for area under sugar beet, to 53,730,000 quintals for commercial fertilisers and to 17,710,000 quintals for nitrogenous manures.

It is quite otherwise with the area under wheat cultivation (Columns 4, 5 and 11). This area in aggregate for the 13 countries under review diminished as between 1913-15 and 1917-19 from an average of about 22,000,000 to about 16,500,000 ha., then without interruption increased again to about 22,000,000 ha. as an average for 1930-32. The wheat area in Germany followed a similar course (Column 11), on the other hand the wheat area of the United States of America, as already observed, shows considerable fluctuations, so that no such close connection can be noted with the fertiliser consumption as is the case with cotton and sugar beet.

In conclusion it may be said that a close connection is observable in the countries under review between cotton and sugar beet growing on the one hand and consumption of commercial fertilisers on the other, while such a connection between wheat growing and fertiliser consumption cannot be said to have been proved to exist.

Some few remarks may be added to what has been stated in Sections I and II.

Assuming that the production figures of commercial fertilisers for the years previous to 1913 represent the actual consumption of these fertilisers — and although taking each year separately this may involve error, the assumption is justified for a period of years — it will be seen that up to 1932 in the principal, that is, the representative countries a close connection exists between the consumption of commercial fertilisers and the extent of the areas under cotton or sugar beet cultivation respectively. On the other hand the wheat production or extent of the wheat areas of the European lands under consideration here appears to have no relation to the consumption of fertilisers.

This independence of European wheat production in respect of fertiliser consumption, however, dates only from the beginning of the century or in any case is observable only from that point of time. The reason for this is not far to seek.

The diminution in European wheat production or in the extent of the wheat areas finds a simple explanation in the fact that the overseas producing countries outstripped the European wheat growers, placed cheaper wheat on the market, and forced back the European cultivation on to the more high yielding lands, thus involving a reduction in area.

In addition, the beginning of the century coincided with a complete change in the conception of plant nutrition. Up to that time the Liebig theories on the subject mainly prevailed, and accordingly the dominant practice was that of the use of chemical fertilisers, but on the other hand the use of physical methods of plant nutrition began to gain ground; that is to say, that apart from the traditional application of farm manure, increased attention was given to circulation of water in the soil, soil structure — the ideal structure being a crumbly soil — and soil aeration. It was recognised at the same time that for the crop rotation it was essential to introduce crops which required highly intensive and careful cultivation of the soil, as for example the sugar beet. These crops too, the roots of which deeply penetrate the soil, while their leaves effectively shade the soil surface, leave the ground in the most favourable condition for the next crop in rotation.

Apart from the sugar beet, the leguminous plants were well known from experience to have an excellent effect in soil rotation, and the practice of using them for green manuring began. The object of green manuring, whether or not with leguminous plants, was, thirty years ago, primarily to apply physical methods of soil improvement. Thus it is seen that from the beginning of the century onwards the problem of manuring took a chemical and physical direction; it belongs, as it were, to the borderland of the two branches of science, a typical phenomenon in the development of theoretical and practical knowledge of a sphere of economy.

The decisive phase, however, in the problem of crop manuring was reached only towards the end of the first decade of this century, when the great discoveries of soil bacteriology were made. As soon as it was proved that all life in the soil and all plant growth depends on the activity of soil bacteria, which exercise their influence in many and various ways, from that time the

predominance of the chemico-physical theory of plant nutrition, and consequently of manuring, came to an end, and the present stage was entered upon, that of the chemico-physico-bacteriological conception. The serial arrangement of this term connotes merely the historical development and has no reference to the degree of importance of the elements. Soil bacteriology, or in any case its practical application, dates from about 1910, but it was not till nearly half a generation later that advantages began to be derived from the more widely diffused practical application of the knowledge of soil bacteria. Although no proof can be adduced, the question may be asked whether the steady increase in the wheat areas since the period 1917-19 in the countries under review — an increase which has been seen to have no relation to consumption of fertilisers, and which moreover continued from 1930 in spite of the rapid decline in fertiliser consumption — is not to be attributed to the knowledge acquired of the chemico-physico-bacteriological methods of nutrition, and thereby as it were reflects the modern methods of cultivation. Proof cannot be readily obtained, but the supposition appears very probable.

III.

Apart from the relations existing between the quantities of commercial nitrogenous fertilisers on the one hand and those of raw sugar and cotton on the other there also exists a far reaching interdependence as to prices.

So long as we are concerned with production costs, it may be asked whether the increasing production of nitrogenous fertilisers has been a consequence of the increasing demand, or whether the increasing demand has resulted from the fresh possibilities of production brought about by the increased output of nitrogenous fertilisers; when however it is a question of prices it is clear that the prices of products have influenced the prices of the means of production.

For the period from 1851-55 to 1906-10, Table III shows a very similar development of cotton prices in America (column 3) and of raw sugar in Magdeburg (column 2) on the one hand, and on the other of nitrate of soda (according to information coming from Hamburg) (column 1). Up to 1906-10 nitrate of soda was the most important nitrogenous fertiliser in the world.

The price of nitrate of soda at Hamburg declined from the high average price of 23.54 marks per 50 kg. for the years 1851-55 to 7.51 marks per 50 kg. as the average of the years 1896-1900. Over the same period the prices of raw sugar fell from 45.34 marks for 100 kg. for 1851-55 to 21.26 marks (Magdeburg quotations) per 100 kg. for 1896-1900, and in the same way the American cotton prices diminished from 10.44 cents per lb. for 1851-55 to 7.28 cents per lb. for 1896-1900. On the other hand it may be noted that the rise in the price of cotton from its lowest point in 1896-1900 with 7.28 cents per lb. to 11.30 cents per lb. as the average of the years 1906-1910 corresponds with a rise in prices of sodium nitrate from 7.51 marks per 50 kg. to 10.02 marks per 50 kg., while over the same period the price of raw sugar in Germany (Magdeburg quotations) slowly dropped, *viz.* from 21.26 marks to 19.98 marks

per 100 kg. The price of raw sugar in fact touched lowest level in 1901-1905 when this product was worth 18.94 marks the 100 kg.; in 1906-10 it went up to 19.98 as stated. This price thus really follows the same curve as that of sodium nitrate or cotton.

In the eighties a formidable competitor to sodium nitrate made its appearance, ammonium sulphate. If attention is given to the price movements of this nitrogenous fertiliser (column 8) it will be seen that they follow very closely those of the prices of raw sugar or cotton, as well as those of sodium nitrate.

It must be further noted that it is not the raw sugar price in general which exercises a decisive influence on the prices of nitrogenous fertiliser but that it is the price of the raw sugar of the leading European sugar-growing countries, and in the first instance, the prices ruling in Germany at Magdeburg (column 2) and in Austria at Aussig (column 7).

In Table III the fluctuations in the prices of raw sugar in Germany, Austria and United States (New York) are compared with the price movements of sodium nitrate. From this comparison it will be seen that the German and Austrian prices of raw sugar show the same variations as do the prices of sodium nitrate while the prices of American sugar are noticeably more independent. From 1896-1900 to 1906-10 one of the periods of rising price for sodium nitrate, the price of American sugar, on the other hand, declined, and the same contrary tendency may be noted over 20 years, *i. e.*, from 1891 to 1910. The price of French sugar has shown the same variations as that of German and Austrian and has done so over 15 years. It is not then the prices of raw sugar in general that have exercised an influence on the course of the prices of sodium nitrate, but in the first place the prices of German and Austrian sugar, perhaps also of French sugar, next to the price of American cotton.

In Table III the price of wheat in Germany is also shown in its course since 1861-65, so as to examine how far it has an influence on sodium nitrate prices. It is a striking fact that in these fifty years the course of the price movements of wheat and sodium nitrate has been similar. It may be admitted however that wheat prices in Germany have not had the same decisive influence as the raw sugar prices on prices of this fertiliser. It may be taken as certain, none the less, that wheat prices in Germany have had some influence, though how definite it is not easy to say, on prices of sodium nitrate, since over that period Germany was the largest consumer of sodium nitrate among the countries, and moreover the wheat areas in Germany undoubtedly received large applications of this fertiliser as good yields could only be so obtained. The predominant influence on the prices of sodium nitrate, however, over the period 1896-1900 to 1906-10 is that of American cotton prices.

The price of ammonium sulphate, which from 1881-85 to 1896-1900 had to follow the severe decline in sodium nitrate prices caused by the collapse of cotton and raw sugar prices, and which in 1895-99 touched its lowest pre-war level of 90 marks per 100 kg per cent, has no important influence on the German market of nitrogenous fertilisers. On the contrary in order to retain a market prices of this product had to follow those of sodium nitrate. At the present day the position is much the same; ammonium sulphate is simply a by-product of gas

Table III.

Average of the years	1 Germany nitrate of soda 50 kg./mark acc. to Hamburg State statistics	2 Germany Raw sugar 100 kg./mark Magdeburg quotation	3 U. S. A. Cotton average price in cents per lb. Census Bureau	4 Germany price of wheat 100 kg./mark Prussian price	5 U. S. A. sugar price New York 96 % centrifugal sugar cents per lb.	6 France price for raw sugar 88 % Paris Frs. per 100 kg.	7 Austria raw sugar-first product Aussig 100 kg./Kr.	8 Germany prices per kg. % nitrogen in ammonium sulphate Mark
1851-55	23.54	45.34	10.44	—	—	—	—	—
1856-60	17.55	59 11	12.36	—	—	—	—	—
1861-65	14.06	46.57	65.32	18.80	—	—	—	—
1866-70	15.17	48.30	25.30	22.00	—	—	—	—
1871-75	13.46	54.78	16.74	23 50	—	—	—	—
1876-80	13.91	52.46	11.42	21.10	—	—	(1) 71.33	—
1881-85	11.20	41 95	10.66	19.00	—	—	(2) 50.02	(3) 1.77
1886-90	9.05	—	10.28	17.40	—	—	(4) 38.68	(5) 1.14
1891-95	8.58	27.68	7.40	16.80	3.48	34.32	(6) 32.10	(7) 1.13
1896-1900	7.51	21.26	7.28	16.20	4.08	29.02	(8) 25.34	(9) 0.90
1901-1905	9.37	18.94	9.62	16.40	3.90	23.52	(10) 22.34	(11) 1.21
1906-1910	10.02	19.98	11.30	20.20	3.96	—	23.90	(12) 1.19

(1) 1874-77. — (2) 1884-85. — (3) 1880-84. — (4) 1887-90. — (5) 1885-89. — (6) 1893-95. — (7) 1890-93. — (8) 1897-1900. — (9) 1895-99. — (10) 1902-05. — (11) 1900-05. — (12) 1908-10.

and coke factories, and since the actual price of production cannot readily be calculated the easiest method for the factories is to follow the prices of sodium nitrate when disposing of the product.

To sum up, it may be said of the period of development up to 1910 that the prices of nitrate of soda depended on the prices of German, Austrian and French raw sugar and on those of American cotton, and that this twofold dependence has persisted up to recent years, in spite of the increase in the European output of nitrogenous materials and especially of sulphate of ammonia. This latter product is undoubtedly much utilised in sugar beet cultivation, and its consumption is thereby closely dependent on the extent of the areas under sugar beet. It may also be noted that the synthetic nitrogenous manures, calcium nitrate (Norwegian salpetre), calcium cyanamide (*Kalkstickstoff*), were not formerly of any great importance on the world nitrogen market. As will appear from the following section, in consequence of the striking development of the synthetic manufacture of sulphate of ammonia and of various salpetres, especially those produced by the Haber-Bosch catalytic process. The earlier synthetic manures have not achieved that place in the world market that was at first perhaps expected for them.

If prices of products have exercised a dominating influence on the prices of means of production, they must necessarily also have influenced the consumption of these. In place of the data relating to pre-war consumption of commercial fertilisers which unfortunately are not available, the imports of sodium nitrate into the principal countries will be discussed here in relation to the price movements of cotton and beet sugar. In Table IV there are shown in juxtaposition for the period 1895 to 1913 the prices of raw sugar in Germany and the excess imports of sodium nitrate into Germany, and also the average prices for American cotton and the imports of sodium nitrate into the United States.

On comparing the Magdeburg price of raw sugar and the excess imports of Chile nitrate of soda into Germany the dependence of this latter on the former is particularly clear in 1902, when with the fall of the raw sugar price from 19.1 marks in 1901 per quintal to 15.3 marks in 1902 there corresponded a decline in the excess import of nitrate of soda from 506,000 to 452,000 tons. The low sugar prices of the wellknown crisis years 1906 and 1907 had no effect on the import of the fertiliser into Germany, but on the other hand the fall of the sugar price in 1912 from 24.6 marks per quintal to 18.5 marks in 1913 did correspond with a decline in the excess imports of nitrate of soda from 785,000 to 747,000 tons. The correspondence occurred also in the nineties, the price fall in sugar from 22.1 marks in 1896 to 19.4 marks in 1897 was reflected in a decline in nitrate of soda excess imports in the following year, *viz.*, from 454,000 tons in 1897 to 412,000 tons in 1898. This difference in time may be due to various causes, but does not invalidate the conclusion.

Unmistakeable too is the connection between the prices for American cotton and the import of Chile nitrate of soda into the United States of America. The price fall in average prices of American cotton from 7.3 cents per lb. in 1896 to 5.6 cents per lb. in 1897 is in correspondence with the decline in nitrate of soda imports from 128,000 tons in 1896 to 83,000 tons in 1897; the price fall from 1900

with 9.3 cents per lb. to 1901 with 8.1 cents per lb. is one year behind a decline in Chile nitrate of soda imports from 204,000 tons in 1901 to 181,000 in 1902. Then followed a sharp rise in American cotton prices from 8.2 cents per lb. in 1902 to 12.2 cents in 1903 and with it an increase in the import of nitrate of soda into the United States from 181,000 tons in 1902 to 252,000 tons in 1903. There was clearly a similar movement in the years 1909 and 1910. In 1909 an import of Chile nitrate of soda of 329,000 tons corresponds to an American cotton price of 9.2 cents per lb., in 1910 with a cotton price of 14.3 cents there was an import of 538,000 tons of nitrate of soda. From 1911 to 1912 the American cotton price fell from 14.0 to 9.6 cents per lb., and the nitrate of soda import similarly from 526,000 to 476,000 tons, while the rise of the American cotton price from 9.6 cents in 1912 to 11.5 cents in 1913 is accompanied by an increased import of nitrate of soda from 476,000 to 574,000 tons.

TABLE IV.

Years	1 Raw sugar price at Magdeburg 100 kg mark	2 Germany excess import of Chile nitrate of soda 1000 m. tons	3 U. S. A. Average price of cotton cents per lb.	4 Import of Chile nitrate of soda into U. S. A. in 1000 m. tons
1895	19.0	446	8.2	125
1896	22.1	440	7.3	128
1897	19.4	454	5.6	83
1898	20.8	412	4.9	125
1899	21 8	513	9.3	122
1900	22.2	470	9.3	184
1901	19.1	506	8.1	204
1902	15.3	452	8.2	181
1903	18.0	450	12.2	252
1904	19.9	485	8.7	281
1905	22.4	520	10 9	273
1906	16.7	571	10 0	374
1907	16.8	568	11.5	332
1908	20.6	601	11.5	324
1909	21.2	637	9 2	329
1910	24.6	723	14.3	538
1911	25.2	703	14.0	528
1912	24.6	785	9.6	476
1913	18.5	747	11.5	574

The raw sugar prices in Germany and the cotton prices in the United States have accordingly had in these countries an unmistakeable influence on the import of Chile nitrate of soda, which in the period under review was still the most important nitrogenous marure in the world.

Unfortunately the lacunae in the available statistical material make it impossible to study the price relations with a view to obtaining even clearer evidence of these interactions. This however has proved to be practicable, as shown in Section V, for the period from 1918-1932.

IV.

In this article the year 1910 has been taken as the turning point in the structure of the world supply in nitrogenous substances, since it was at about that date that a complete transformation came about in the world market for these materials. Up to the time when the manufacture of sulphate of ammonia was first undertaken, about 1880, Chile nitrate of soda, almost the sole form of nitrogen known, was predominant on the world market; and even after the appearance of the competitor up to 1910 Chile nitrate of soda was the most important and the most in demand of the nitrogenous fertilisers on the world market.

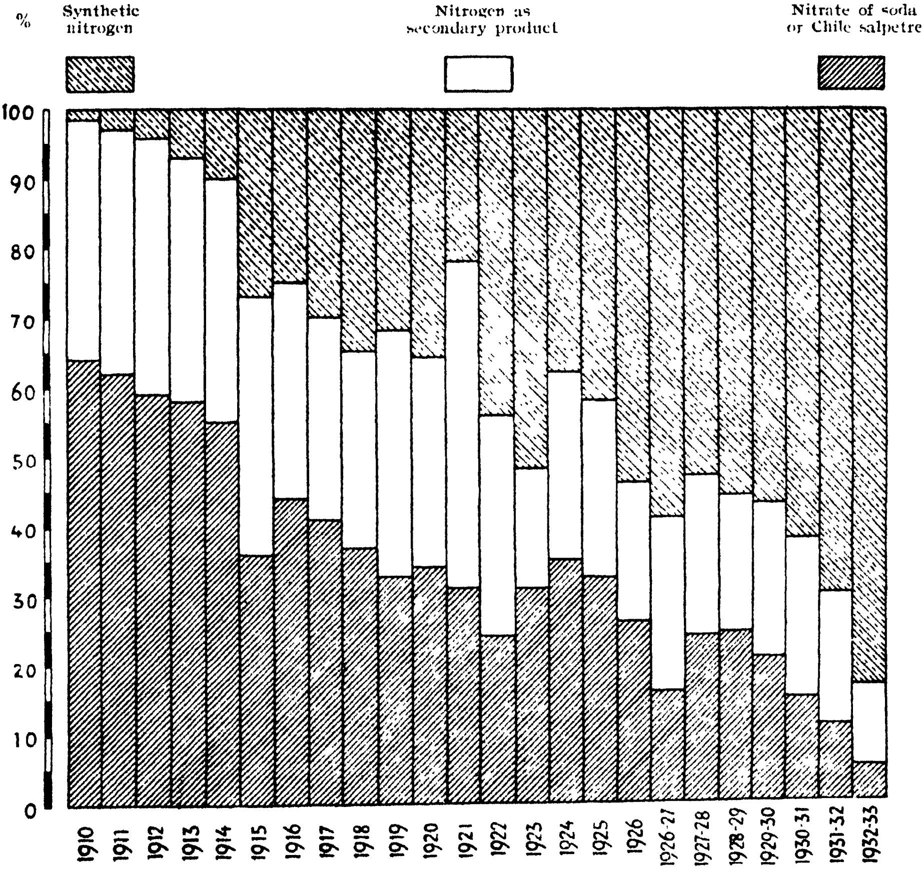
Another competitor which was to prove so serious a rival to this nitrate was already actually on the field. This was the synthetic manufacture of nitrogen, the utilisation of the practically inexhaustible stores of nitrogen present in the atmosphere.

The technique of this discovery was based on the natural phenomenon, known for some long time past, that the action of the electrical charges of the atmosphere is to transform the nitrogen of the atmosphere into nitric oxide which is washed by the rain out of the air, precipitated on to the earth, and there entering into chemical combinations with water, or more precisely with hydrogen, becomes transformed into nitrogen compounds which form plant nutrients. It is this principle that forms the basis of the Caro process of manufacture of calcium cyanamide as well as of the Norwegian process of manufacture of calcium nitrate, although in practice some important modifications have been introduced into the processes. In all of these very large quantities of electrical power are required, so that factories could only be erected for the purpose in localities where electric power was available at low cost, as is markedly the case in Norway, and also in Germany, Italy and other countries in certain districts.

It was the world war, disintegrating as it did the structure of the world economic system as heretofore existing, which had the decisive influence on the form taken by the demand for nitrogen from that time onwards. For the Central European powers which up to the declaration of war had covered their nitrogen requirements for the most part in the form of sodium nitrate, the nitrogen question became a vital one, since along with the large demand for nitrogen for the national intensive agriculture there arose suddenly the pressing needs for the army. There were no obvious possibilities of increasing the production of nitrogen, and in particular of nitric acid at high concentration. For various reasons since the beginning of the war there was a decline in the output of gas and coke works, which turn out ammonia water as a by-product. Hence it was impossible to count on any additional production in that direction. It was calculated that in Germany after the declaration of war the nitrogen supplies together with the anticipated production might cover the greatly increased requirements up to about the beginning of 1917 but that from that date a shortage must occur. It thus became essential to initiate new plants for nitrogen production, and there was some hesitation as to the method to be adopted.

Briefly, the choice fell on the Haber-Bosch method which was already known but not widely used, and it thus became practicable, with the help of a metallic catalyser, to transform into ammonia, or nitrate of soda compounds, the atmospheric nitrogen of which a virtually inexhaustible supply is available.

Changes in the Structure of the World Production of Nitrogen since 1910.



A grant from the State was made and the world renowned Leuna factory was erected, at Merseburg in Central Germany, where fixation of atmospheric nitrogen is carried out by the Haber-Bosch process.

It remains to describe what has occurred on the world nitrogen market from 1910 up to 1933. As shown by the graph, in the course of these twenty years a complete transformation has taken place in the world supply of nitrogen.

In 1910 Chile salpetre or nitrate of soda occupied about two thirds of the world market in nitrogenous substances, whereas in 1932-33 it had become no

longer of any great importance, its proportion measured in pure nitrogen amounting to not more than 4.4 per cent, of all material marketed. It was the war which gave the first impulse to this development, but this was only the beginning of the movement; it was not till 1922 and 1923 that the situation showed a radical change, when the synthetic fixation of nitrogen forged ahead not only as compared with nitrate of soda but also as compared with the nitrogen supplies from by-products, and reduced these two original sources of nitrogen to unimportance. In 1932 the world production of nitrogen was composed as follows: 83 per cent, the synthetic manufacture, mainly by the Haber-Bosch process, 12.6 per cent. ammonia obtained as a by-product of the coke and gas factories and only 4.4 per cent. of nitrate of soda.

This transformation on the world nitrogen market has, apart from the change in the predominant form of the commodity, a great importance for world economy, since Europe, and in particular Germany, one of the largest consumers in Europe of nitrogen, was thereby rendered independent of the supply from South America, or rather from Chile, and thus the world market which previously was fairly homogeneous was divided into two groups of interests, opposed to each other and with marked interactions. A great rivalry ensued, in particular between Chile salpetre or nitrate of soda and synthetic nitrate in which the latter gained the day and in spite of the agreement reached between the groups of interests there remained to the Chilean nitrate of soda, once the only important form, only a quite humble place on the world market.

The competition is in fact mainly a price rivalry. In the following section, an account will be given in detail of this contest between the original sodium nitrate and synthetic nitrate, or ammonium sulphate, and an examination will be made of the relations of the competing fertilisers to the products of arable cultivation for which these fertilisers are required.

CURT KAPPSTEIN.

(to be continued)

AGRICULTURAL CO-OPERATION IN AUSTRIA

§ 1. — AGRARIAN AND ECONOMIC DEVELOPMENT IN AUSTRIA.

In order to make clear the present situation of agricultural co-operation in the Austrian Republic it may not be out of place to give briefly and in general outline some account of the economic and agrarian development of post-war Austria and to sketch the economic and social surroundings of the activities of the co-operative undertakings.

In the first place it should be noted that the economic structure of the new Austria has undergone marked changes. Whereas before the war, when the country was an integral part of the Austro-Hungarian Empire, the industrial production formed the larger proportion, 60 to 65 per cent., of the national income, agricultural production representing one third only, in recent years

the share of agriculture in the aggregate national income, amounting to some 9,000,000,000 to 10,000,000,000 schilling, has increased to the extent of forming half, or some 5,000,000,000 schilling. In consequence the agricultural character of the country is now more pronounced than formerly.

Before the war in exchange for industrial products Austria depended for the necessary supplies of agricultural products on the territorial area of the monarchy, cereals from Hungary, sugar from Bohemia, Moravia, etc. The post-war change was a radical one. In respect of the all important manufacturing industry, Austria lost her former markets, *viz.*, the neighbouring countries, which now were planning the building up of their own manufactures and the creation of a complete and self sufficing national economy.

In the report submitted by Austria to the International Economic Conference of 1927 the following statement is made: " Austria can obtain raw materials only with the utmost difficulty and in quantities that are inadequate. Agriculture has greatly suffered from the effects of the war. In addition the unfavourable position as to supplies has made it necessary to maintain in force the restrictive measures introduced during the war (maximum prices, food rationing, etc.), measures which by their very nature exercise an unfavourable influence on production. Moreover, the neighbouring States are isolated from each other by prohibitions of imports and exports scarcely mitigated in any way or only by quota agreements of the most complicated kind and frequently unsatisfactory. "

The traditional economic life, the very setting of the country, disappeared, and the newly formed Danubian Republic could find its fresh economic orientation only by degrees and at the cost of suffering.

The decline in industrial production in Austria was rendered more acute by the world economic crisis, so that, taking the industrial production of 1928 = 100, the index-numbers for the following years become: 1929, 103; 1930, 87; 1931, 76; 1932, 66 (*World Economic Survey*, League of Nations, 1932-33, p. 84). Passing on from this formal representation of the decline in industrial activity, we come, as a concrete illustration of the changes in the internal structure of the national economy, to the very considerable reduction in the total number of cotton spindles in the last few years. As is well known, the textile industry, after those of iron and metal working and paper making, forms one of the most important branches of the industrial production of Austria. It still employs at the present time about 75,000 persons.

Number of spindles on 1 February.

1927	102	per cent.	of the	total of	1924
1930	87	»	»	»	1927
1933	84	»	»	»	1930

(Prof. John CONDLIFFE " Die Industrialisierung der wirtschaftlich rückständigen Länder ". *Weltwirtschaftsarchiv* 1933, Heft 2, Bd. 37, p. 347). This indicates a continuous shrinkage of the cotton industry.

The unemployment figures, according to the unemployment insurance statistics, are very significant in this connection. They reached on 31 October 1934 a total of 331,994 persons, among whom the number of those coming from agriculture, forestry and market gardening amounted to 6,042.

At the same time industry declined, agriculture received an increased impetus, as appears from the following figures (in tons):

Agricultural Products	1922	1933	Index-number
Wheat	201,988	397,770	196.93
Rye	345,179	686,960	199.02
Barley	121,909	332,929	273.10
Oats	265,866	502,778	189.11
Maize	88,319	136,592	154.67
Potatoes	1,398,286	2,354,938	168.42
Sugarbeets	172,828	1,067,493	617.66
Milk (litres)	480,000,000 (1919)	2,800,000,000	583.34

In respect of production of cereals rye production has shown the most increase. From 1922, the year in which Burgenland was incorporated in the present territory of Austria, to 1933, the production of rye doubled itself. Rye has always formed the principal breadstuff cereal of the Austrian population A nearly similar increase was attained by wheat production. A very marked increase will be noted in the production of milk and in that of sugar beet, the former being nearly and the latter more than sextupled.

The average yield per hectare in 1913 was exceeded for almost all agricultural products, or at least nearly regained, as the following table shows (quintals per hectare):

	Winter wheat	Rye	Barley (spring)	Oats	Maize	Beetroot	Potatoes (late varieties)
1913	14.8	14.7	13.9	13.5	16.3	241.6	91.1
1931	14.3	12.9	12.9	10.6	20.6	229.0	148.6
1932	15.3	16.0	16.0	12.7	19.8	239.0	138.8
1933	18.1	17.7	19.5	16.4	21.3	229.6	120.6

In 1933-34 it proved possible to cover by the national production the total demand, human and animal, for rye up to 98.71 per cent. as compared with 78.99 per cent. in 1928-29; for oats 95.98 per cent. was covered as compared with 82.97 per cent. in 1928-29; for potatoes the demand could be almost covered by the national production, up to 98.79 per cent., while for barley the percentage covered was 72.39. Austria completely met its own requirements in sugarbeet

by its own production, whereas immediately after the war the proportion covered was 6 per cent. only. It has proved possible to meet requirements in wheat by more than half, or 55.84 per cent. On the other hand in 1933-34 only about one fifth (20.05 per cent.) of the maize requirements were met, while in 1928-29 a percentage of 43.21 had been reached.

Austria now even exports some of her agricultural products, especially dairy products, whereas in the first post-war years milk had to be imported from abroad to supply the needs of children and sick persons.

In this way it has been possible to reduce the adverse trade balance which in 1931 stood at 867,680,000 schilling, in 1932 at 613,200,000 and in 1933 at 375,800,000 schilling. The adverse balance subsequently fell from the first half of 1933 to the first half of 1934 from 198,2400,000 to 153,900,000 schilling. It is true however that at the same time the total foreign trade turnover which reflects the world trade in its present state of collapse underwent a further decline. The value of imports fell from 2,208,234,000 schilling in 1931 to 1,191,300,000 in 1933 and that of exports from 1,340,554,000 to 815,500,000 schillings in the corresponding years. In comparison with the former Austro-Hungarian monarchy where in 1912 the export quota per head of population was 93 schilling, in the new Austria this quota in 1929 was 342 schilling, and 125 schilling in 1933. In consequence, even in this year of crisis it was still 34 per cent. higher than it had been under the former monarchy. Among the States which formerly constituted the Austro-Hungarian monarchy, Austria is the one which, both from the point of view of the per capita export as from that of the quota per area (10 schilling per square kilometre in 1933) has the largest export.

As regards the social structure of the population in 1934, out of a total population of 6,739,062 persons rather more than one fourth, or 1,861,856 persons, were to be found in the Federal capital. If Vienna be left out of account, however, Austria may be regarded simply as an agricultural country. The agricultural population does not form more than about 30 per cent. of the whole population, but taking the corresponding figures for the different provinces of the Federation it appears that apart from Vienna and Voralberg more than half of the population of any province is agricultural. In Lower Austria the proportion exceeds 60 per cent., in Burgenland 75 per cent., etc. This is clear proof of the considerable importance of agriculture for the greater part of Austria.

As regards the system of tenure of agricultural land in Austria, which is a decisive element in the development of agricultural co-operation, the position in accordance with the farm census of 14 January 1930 appears below.

In the distribution of agricultural lands it is noticeable that the class of large farms of 100 hectares and over constitutes, numerically, 1.4 per cent. only of the total number of farms, but that in area these farms constitute nearly half, 46.7 per cent. But the fact must be taken into account that out of the total area of these farm estates, 3,489,557 hectares, more than 3,000,000 hectares consist of forests, alpine pastures and unproductive lands. In consequence the cultivated land of large estates occupies at the present time only some 5

Size-classes		Number of farms		Total area ha.	
Farm holdings consisting of parcels of less than	2 ha.	118,783	(27.4 %)	111,393	(1.5 %)
Small peasant farm holdings . . .	2-5 »	98,034	(22.6 %)	325,636	(4.3 %)
Medium-sized	5-10 »	76,004	(34.5 %)	544,987	(21 %)
	10-20 »	73,446		1,058,550	
Large farm holdings	20-50 »	52,783	(14.1 %)	1,541,423	(27.5 %)
	50-100 »	8,290		556,921	
Large estates	100-200 »	3,194	(1.4 %)	444,957	(46.7 %)
	200-500 »	1,728		527,145	
	500-1000 »	536		373,851	
	Over 1000 »	562		2,143,604	
Total . . . ha.		433,360		7,028,467	

to 6 per cent. of the total area. Latifundia in the true sense of the word have no existence in Austria.

The holdings consisting of separate parcels and the small holdings are the most numerous, amounting to 50 per cent. numerically and representing 5.8 per cent. of the total area; the medium-sized peasant holdings of 5 to 20 hectares constitute 34.5 per cent. of the total number of farms with an area representing 21 per cent. of the total area, while the figures for the large farm holdings are 14.1 per cent. numerically and 27.5 per cent. in area. The post-war agrarian reform, which has been carried out in Austria as elsewhere less for economic than for social reasons, has resulted in a small increase in the number of small holdings and has somewhat redressed the balance of the distribution of ownership of agricultural land.

In view of the importance of agricultural co-operation for the carrying out of the agrarian reform in Austria and for the establishment of the new farm settlers, it was enacted that " under certain conditions co-operative societies may acquire parts of a farm for the purposes of undertaking land settlement, even if the owner of the farm does not apply for expropriation and provided that such part is not essential to the systematic farming of the whole. The co-operative societies may further present an application for the purchase of any peasant holdings which have been completely incorporated in large estates. "

It can be taken as an accepted fact that, in an economic structure of agriculture in which the small size classes preponderate, co-operation will have, *ceteris paribus*, more opportunities of development. Striking instances of this occur in Switzerland, Denmark, etc., where, with a farm structure in which the small and medium-sized holdings predominate, there has been a very vigorous development of co-operation to the point of serving as a model for other countries.

By means of the social bond which unites the peasant farming population the small holding seeks in co-operation the most appropriate means for compensating its own economic insufficiency and bringing its own productive capacity up to the level of that of the large estates.

The above is a brief sketch of the economic and agrarian characteristics of Austrian national economy and will serve as a basis for the account it is proposed to give of the development of agricultural co-operation.

§ 2. — The legal basis of the co-operative organisations.

In Austria the idea of the voluntary banding together of farming forces, by themselves economically weak, for the protection of their common interests could take definite shape only in the second half of the XIXth century, in other words, only after the emancipation of the peasants under the Austrian Empire. Although the system of land tenure differed markedly in the different Crown lands, and although the legal position of the peasants varied from one province to another, it may generally be stated that the definitive regulation of the feudal relationship of serfdom was not introduced till the law of 7 September 1848. The peasant population were then freed and thereby the barriers to the organisation of the farming system were removed. The dues in kind as a component part of the whole feudal system of land tenure were abolished and a money economy prevailed increasingly in the country. The new regulation of economic activity, although in the first instance mainly directed on the town and urban economic organisations, took shape in Austria in the promulgation of the commercial law of 1856 and of the law on the associations of 1867. These two laws subsequently became the authority for the legal management of agricultural unions and co-operative societies, which began to be formed here and there.

It was the European crisis of the years from 1870 to 1880, and in particular the disastrous season of 1873 for Austria, which led to the systematic formation of co-operative societies with a view to making it possible to meet to some extent the credit requirements of the peasants. In this year the law on co-operative societies was promulgated. The legal structure of present-day agricultural co-operation finds its main basis in the principles of the law on co-operative societies enacted at that time in the Danubian monarchy. In spite of the political revolutions and territorial changes of the new Austria the law on co-operative societies, as also that on share companies, which regulates the most important form of collective enterprises in the national economy, has not been altered in essentials, since the objectives of the co-operative societies, as also the means by which they attain these ends, have remained the same, as well as the economic organisation of the country as a whole.

The leading principles of the law are as follows. Taking as basis the definition of co-operative societies in the German law on co-operation of 1867, the co-operative society is defined as an association with unlimited membership, which endeavours to further the economic activity of its members by means of a joint business management or by the provision of credit, such associations

being known as *Erwerbs- und Wirtschaftsgenossenschaften.* These three characteristics, in the sense of the law, determine the distinctive nature of co-operative undertakings. The first feature, the unlimited membership, distinguishes them from the share companies, where, as is well known, the number of members is fixed by that of the shares issued, each member having only one vote independently of the number of shares held. The co-operative society does not constitute in the first instance an amalgamation of capital but a grouping of persons, the variable number of members necessarily involving fluctuation in the funds of the society.

In the second place the co-operative society must have an economic purpose; it may be a loan society, or may take the form of an association for purchase or storage of raw materials; it may function as a co-operative society of production, for distribution, housing, etc. Its objects should not be primarily those of social policy or general education, but should be merely the protection of the interests or the encouragement of the activity of its members who are at one and the same time the owners of the co-operative undertaking and its customers, differing in this respect from trading enterprises which work for third parties. None the less, in practice, it may be noted that it is frequently advisable in order to obtain a higher output to bring into the undertaking persons who are not members. Finally the management of the societies must be carried on jointly, which constitutes the essence and the object of all co-operative activity.

The organs of the co-operative society include : the general meeting, the legislative body of the society, which may be summoned if one-tenth of the members so desire, the Executive Committee and the management council. The Committee is empowered by the general meeting to manage the affairs of the society, and represents it in court and elsewhere. The competence of the Committee in the representation of the society extends to all the business for which, in accordance with the civil law in force, there must be a special power granted in accordance with the nature of the business (§ 18). The Committee is expected to publish, at latest within the first six months of each financial year, a balance sheet for the past year. By the law relating to co-operation there may be attached to the Committee a management council chosen from among the members of the society, excluding the members of the Committee. This body, which is not subordinate to the Committee but acts in coordination with it, supervises the conduct of business in all branches of the administration, audits the accounts and the balance sheets and reports yearly to the general meeting.

The foundation and liquidation of co-operative societies as voluntary undertakings of a private character is entirely at the option of the society. The foundation may come about by the grouping of at least seven persons in accordance with the provisions of the German, English, French, Swiss and Belgian laws on the co-operative societies. The society becomes a corporate body only after registration (§ 8). Before registration, the co-operative society does not exist as such and cannot in consequence under its signature claim rights or make contracts, or appear in court. The register of co-operative societies is kept

by each commercial court. In the register are entered all prescribed particulars, such as the trading name of the society, the Committee and its composition, the components of the capital, etc. The liquidation of the co-operative society may be decided by a majority of at least two-thirds of the votes. It happens only rarely that a society is dissolved by the administrative authorities, although they have the right to suppress societies that have exceeded the legal limits of their competence.

As regards liability of the society, which represents the basis of its credit capacity, the societies may be formed either with unlimited or with limited liability. Every member of a limited liability society is liable, in the event of failure or liquidation of the society, for its engagements – in so far as no higher liability has been established by the rules of the society- not merely with his shares, but also by a supplementary sum as fixed by the rules. The members of a society with unlimited liability are jointly and severally liable for all the engagements of the society, in so far as the assets do not cover the engagements in the event of liquidation or failure. The private creditors of a member are not authorised to claim in satisfaction of their demands effects, or credits, forming part of the property of the co-operative society. As regards the creditor more security is naturally offered by the unlimited liability of the society. It must however be observed that on the other hand it is the introduction of the legal form of limited liability which has enabled the co-operative societies to develop so rapidly. It is only since its introduction that the appropriate juridical form was created for all these societies which are dependent only to a very small extent on foreign capital. The general tendency in the foundation of co-operative societies is now in favour of an increased application of limited liability. The unlimited liability form is disappearing, except as the legal basis of co-operative credit societies.

During the war, when in some regions the collapse of many co-operative societies had to be reckoned with, new provisions were enacted, on 21 March 1918, on the procedure to be followed in case of failure of a co-operative society. *Inter alia*, there was introduced unlimited liability to make supplementary payments. With this kind of liability, if the shares were not adequate to the covering of the losses, the members were expected to make supplementary payments up to the full total of the liabilities in proportion to the shares held by them. The estimate of the contributions to be paid must be submitted to the bankruptcy court. For the creditor this form of liability is less favourable as he cannot make good his claims on the whole of an individual member's property. Possibly the adoption of this form was solely the result of the special war conditions, or possibly the long drawn out procedure in the case of failures made it unpopular; in any case the form has not been so far widely adopted in Austria. Even in Germany, the country where it was first employed, it applies only to about 0.3 per cent. of the total number of agricultural co-operative societies. The amending law of 14 July 1920 again introduced into Austria what were known as co-operative societies without guarantee, but only for consumers' societies. In practice these have almost no importance at the present time.

Out of all the urban and rural co-operative societies registered at the beginning of 1932, numbering 5,738 in all, 1,800 were Raiffeisen banks, all with unlimited liability; 1,986 were agricultural co-operative societies, including 1,975 with limited and 13 only with unlimited liability (*viz.*, 9 in the Vorarlberg, two in the Tyrol, one in Upper Austria and one in Carinthia), and 290 were consumers' societies, including 279 with limited and 11 with unlimited liability, *viz.*, four in Upper Austria, four in the Vorarlberg and one in Lower Austria, one in Salzburg and one in Styria (*Statistisches Handbuch für die Republik Oesterreich*, Wien 1933, p. 110).

§ 3. — Principles of the audit of co-operative societies.

At the time of the enactment of the law on co-operative societies, the movement was still in its early stages. Before any conclusions could be drawn as to the means for ensuring by legislation a successful development of this new form of rural association, it was essential that many aspects of co-operative activity should become clear in practice. Among these were in the first place the legal audit of the societies, the control of their activity, in accordance with their rules and legal prescriptions. The enactment of a law on the audit did not take place till 30 years after that of the law on co-operative societies, *viz.*,on 10 May 1903, although naturally in the meantime the voluntary audit of the societies' accounts was carried out by the federations. The law however transformed this optional audit into a biennial compulsory audit.

It was due to the co-operative societies themselves that this audit was introduced, although the obligatory character imposed certain restrictions on them. Thus in the Report presented by Dr. Lekusch, Director of the Central Federation of Co-operative Societies, to the International Congress of Agriculture held at Prague in June 1931, the following statement appears: " Since for some time past many co-operative societies have voluntarily combined to form groups, to which they have entrusted of their own accord the audit operations prescribed by the measure proposed, this law may be said to have been in same degree anticipated by the societies. The parties concerned had recognised the necessity for modifying the principle of almost unlimited autonomy on which was based the legislation relating to the societies known as *Erwerbs– und Wirtschaftsgenossenschaften* (Co-operative Industrial and Economic Societies), and their efforts were concentrated in this direction. The fact that those in charge of the administration were not always equal to their task, that their carelessness, or that of the members, frequently amounted to indifference, and that it even happened that the co-operative bodies became guilty of malversation, all this resulted, in certain cases, in disasters that were bound to bring discredit on the principles of autonomy. It was accordingly essential to remedy these drawbacks by the institution of the audit service, the more easy to effect as the audit system is in complete harmony with the principle of self-government. " These remarks throw light on the reasons which induced the co-operative societies to supervise more closely co-operative activity and to safeguard it against excess and abuses.

In virtue of the legal prescriptions relating to the audit, every federation of co-operative societies constituted in accordance with the legal provisions is empowered to appoint an auditor for the agricultural co-operative societies which are affiliated to the federation. To acquire the right to exercise this power the auditing federation must: 1. be registered as an association in accordance with the law of 1873 on co-operative societies; 2. have as its object the audit of the co-operative societies affiliated to it; 3. include at least as a rule 50 co-operative or other societies. A smaller number is allowed only when the federation in question includes all the co-operative societies of a province or at least all the co-operative societies in existence in the province with similar economic objects.

The audit is frequently carried out by the State itself, especially when the co-operative societies are subsidised by the State or by the province or where loans without interest have been made to newly formed societies. This is expressly stated in article 14 of the law on audit. It is in this way that the legal audit is still made to-day in Lower Austria, Upper Austria, and Salzburg, and in Vorarlberg it was also carried out by the organisations of the province in question up to 1 July 1933. Since that date the Federation of agricultural co-operative societies in Vorarlberg has been placed under the legal audit of the General Federation of agricultural co-operative societies in Austria. In Lower Austria the Government audit is entrusted to the important representative body of the Lower Austrian Chamber of Agriculture, the influence of which on the development and progress of agriculture in general and on the development of co-operation in Austria is very considerable. In the other provinces, *viz.*, Burgenland, Carinthia, Styria and the Tyrol, the legal audit has been for a long period carried out by special co-operative auditing associations. In these provinces, where the Government of the province lays no claim to carry out the audit, the General Federation of Agricultural Co-operative Societies in Austria (*Allgemeiner Verband der landwirtschaftlichen Genossenschaften in Oesterreich* constitutes the organ for legal audit of these federations of the provinces in virtue of a decree of the Federal Ministry of 2 July 1924.

Subsidies are frequently granted by the Government for the regular execution of legal audits, as in many cases the expenses cannot be met by the co-operative societies which undergo audit. On the other hand there is no special fee assigned to the audit federations for this purpose.

According to the terms of the law, the auditor has not only to supervise and check the accountancy, the proper keeping of the trading books, the establishment and closing of the accounts in good and due form, but he should also take into consideration whether the co-operative society, in accordance with its constitution and activity, is meeting the requirements of the law on co-operative societies and the aims of the co-operative system. He must in consequence ascertain if on the one hand the organs of the co-operative society in question are observing the legal prescriptions, and and on the other hand if the management of the society is such as to ensure successful working. By the terms of the law the auditor must undertake not to communicate the result of his observations to third parties; he must in particular abstain from any comment likely

to prejudice the credit of the co-operative society. In accordance with the law on the audit, the auditor's report must not make mention of the activity and of the management of the society except in cases where he has had to pass criticism.

The law allows the societies the free choice of their audit central and gives them the opportunity of transfer to the central under which they formerly were placed. As this opportunity of changing the central has been more especially taken by co-operative societies the affairs of which are in disorder with a view to distracting the attention of the competent bodies from their unfavourable situation, it is proposed to cut short by means of legal prescriptions such practices which prejudice the interests of the members of societies.

In order to prevent the formation of fictitious undertakings involving misuse of the co-operative form, the federal law of 3 August 1934 provides that the entry of a co-operative society in the co-operative register may be allowed by the court only if the association to be founded has obtained the promise of admission into a recognised audit federation, or if the government of a province, or a central agricultural institution, has declared that it will undertake the audit of the co-operative society applying for registration. If the society in question does not receive within four weeks a reply from the audit federation or from the provincial Government to its application, the application is considered to have been refused. After consultation with the federation or the provincial government refusing admission, the court can allow exceptions only if from the economic point of view there are no positive reasons against the foundation of the co-operative society and if it appears probable that the society will be managed in the true spirit of the law on co-operation.

The compulsory audit introduced by the law has increased the confidence in co-operative societies and has also resulted in larger membership. By drawing attention to the errors, often made involuntarily by the administration, the audit is of great service to the society enabling it to give a better direction to its activity as a result of the good advice obtained.

Within the last two or three years co-operative and audit law have been subjected to a partial reform carried out on the basis of experiments made. It was particularly advisable to alter the provisions relating to the audit carried out by the State, which, it seems, has never been a success, and to entrust this audit to the competent co-operative audit federations. From 11 April 1933 a committee of experts was constituted attached to the General Federation of agricultural co-operative societies and this body has entered upon the relevant preparatory work.

§ 4. — The General Federation of Agricultural Co-operative Societies.

The fall of the Austro-Hungarian monarchy brought with it the dissolution of the General Federation of Agricultural Co-operative Societies (*Allgemeiner Verband der landwirtschaftlichen Genossenschaften*) which had been in existence since 1898 and which included as members 9,000 societies with 30 federations

in the different divisions of the Dual Monarchy. After the war, in 1919, the *Agroterra*, a limited liability company founded during the war for the encouragement of co-operative trade, was entrusted with the representation of the interests of the Austrian agricultural co-operative societies. In 1923 a section of this *Agroterra* was transformed into the General Federation of Agricultural Co-operative Societies which was constituted as a corporate body and from that time this has acted as the Central of all the co-operative societies.

The main functions of this Federation are: to encourage and to develop all agricultural co-operation in Austria, to represent and to safeguard the common interests of these societies in respect to legislation and administration, to advise and to support its members in all co-operative matters, to organise the agricultural co-operative societies on a systematic basis, and finally to supervise the conduct of business by the societies.

The General Federation also organises courses in co-operation and co-operative " days, " and publishes the central organ of the agricultural co-operative societies (*Oesterreichische landwirtschaftliche Genossenschaftszeitung*), etc. In addition, in virtue of the law of 10 February 1927, it is called upon to prepare statistics of agricultural co-operation. Its statistical section has already supplied valuable material on different aspects of co-operation, *e. g.*, on the number of members of the societies, the total of their shares, the total turnover of the societies, the deposits and loans made, etc.

In regard to the question of taxation in relation to co-operation, in accordance with the law of 6 June 1924 the Raiffeisen banks, as well as the federations of these banks, are exempt from taxes, in so far as they are constituted under the form of registered co-operative societies, limit their trading operations to their members, pay interest on the shares at a rate not exceeding the current discount allowed by the National Bank of Austria, and allocate any surplus to a reserve fund. By an ordinance of the Federal Government of 19 May 1933 the central co-operative banks have been exempt from the taxes payable on the transfer of financial business from bank to bank.

In order to establish a closer contact between the agricultural co-operative societies and the principal agricultural organisations, the Committee of the presidents of the central agricultural organisations is represented in the presidential bureau of the General Federation of Agricultural Co-operative Societies and on the other hand the General Federation takes part in the discussions of this Committee.

The following co-operative societies and federations in the separate provinces of the Austrian Republic formed part of the Federation on 1 January 1934.

As appears from the table below the total number of co-operative societies on 1 January 1934 was 3.617 as compared with 2,220 on 1 January 1914. In spite of the war, revolution and economic crisis their number increased by 62 per cent. in the post-war years, a fact which may in part have relation to the changes in the economic structure of the country. About half the number of the co-operative societies consists of Raiffeisen banks, one-fourth are dairy societies ; then follow in decreasing order the stock breeding and stock marketing societies, the societies for purchase and sale and the co-operative societies of various kinds.

The agricultural co-operative societies are most widely diffused in Lower Austria, where one half of these societies are to be found, or 1,755 in all. Their number is lowest in Salzburg, 76 only, nearly all Raiffeisen banks with their federations. Lower Austria is thus well in advance of the other provinces of the Confederation in development of agricultural co-operation, although considerable progress may be noted in all.

Provinces of the Confederation	Credit associations	Co-operative dairies	Stock-breeding and marketing societies	Co-operative societies for purchase and sale	Miscellaneous co-operative societies	Co-operative Federations	Total numbers	Aggregate membership
Lower Austria . .	583	709	310	59	91	3	1,755	95,000
Styria	281	39	96	11	57	3	482	90,000
Upper Austria . .	286	23	8	16	20	1	354	71,000
Tyrol	190	76	15	5	21	2	309	39,000
Carinthia	189	3	13	27	31	3	266	50,000
Burgenland	116	84	2	6	19	1	228	32,000
Vorarlberg	84	54	1	—	7	1	147	19,000
Salzburg	75	—	—	—	—	1	76	12,000
Total . . .	1,804	983	445	124	246	15	3,617	408,000

This development of co-operation corresponds fairly closely to the relative territorial extent and to the density of population in the different provinces. In this respect Lower Austria stands first with an area of 1,930,119 ha., and a population in 1934 of 1,521,000 persons out of a total Austrian population of 6,534,244 inhabitants. Salzburg, on the other hand, occupies the sixth place in respect of area, *viz.*, 715, 324 ha., mainly alpine pastureland, and the seventh in respect of population, 248,188 in 1934, only just in advance of Vorarlberg which takes the last place with 157,358 inhabitants. Naturally it is not here proposed to establish any direct causal relations, but merely to comment in passing on the parallelism of these various facts. The intensity of co-operative development is to be attributed to other economic and social causes, as has been indicated in Section I.

In accordance with the preceding data, the number of individuals grouped in agricultural co-operative societies on 1 January 1934 in Austria was 406,000. It is however probable that some of these persons have been counted twice over as a farmer often belongs to two, and even to more, societies at one time. The estimate may certainly be made that 200,000 farmers are grouped in the agricultural co-operative system. As the peasant farming family is usually reckoned at five persons on the average, this figure may be interpreted as representing about one million individuals of the farming population, that is to say, more than half of the agricultural population of Austria come under the co-operative organisation. These figures are of course merely approximate. In the absence of any reliable data making an exact calculation possible, these estimates are put forward as a starting point for further studies.

It would be very desirable to ascertain what number of farms are grouped in the co-operative system and which are the size categories of farms most concerned in the co-operative movement, as also what is the aggregate area of cultivated lands of these farms. Unfortunately in Austria, as in almost all countries, there is a nearly complete absence, in statistics of co-operation, of data of this kind. The crude figures, detached from their economic content and without relation to farming practice, scarcely provide an exact picture of the actual effective utility to agriculture of the co-operative element. It is certainly from no want of good will but only from want of the necessary funds that the General Federation does not undertake, as it did in pre-war years, the compilation of accurate returns.

As regards external structure, the General Federation of Agricultural Co-operative Societies included on 1 January 1934 the fifteen following federations shown with the co-operative societies affiliated to each federation:

(1) *Landesverband der landwirtschaftlichen Genossenschaften im Burgenland*, with 227 co-operative societies, (audit, legal defence of the interests of co-operative societies, financial operations and trade in products);

(2) *Landesverband der landwirtschaftlichen Genossenschaften in Kärnten*, with 163 societies, (audit, legal defence, financial operations and trade in products);

(3) *Allgemeine landwirtschaftliche Genossenschaftskasse für Kärnten*, with 57 societies (trade in products);

(4) *Sveza koroskih zadrug* (Federation of Carinthian Co-operative Societies, includes the Slovene societies of Southern Carinthia and of Klagenturt and uses the Slovene language) with 43 societies (audit, legal defence and trade in products);

(5) *Niederösterreichische landwirtschaftliche Genossenschaftszentralkasse*, founded in 1898, with 1,750 societies (legal defence, financial operations);

(6) *Verband landwirtschaftlicher Genossenschaften in Niederösterreich*, with 106 societies (trade in products);

(7) *Niederösterreichische Molkerei in Wien*, with 154 societies (handling of members' milk);

(8) *Oberösterreichische Genossenschafts Zentralkasse in Linz*, founded 1900, with 345 societies (financial operations);

(9) *Verband der Raiffeisenkassen des Landes Salzburg*, founded 1905, reorganised 1927, with 75 societies (financial operations);

(10) *Landesverband der Steierischen Raiffeisenkassen und landwirtschaftlichen Genossenschaften in Graz*, founded 1900, with 459 societies (audit, legal defence, financial operations);

(11) *Steierischer Landwirtsverband*, with 272 societies (trade in products);

(12) *Verband Steierischer Milchgenossenschaften*, founded in 1927, with 30 societies (representation of dairying interests, by regulation of supply and demand, with a view to obtaining a planned and orderly handling of the output and distribution according to the season and locality of production, together with a remunerative price to the producer);

(13) *Tiroler Genossenschaftsverband* with 221 societies (financial operations and trade in products);

(14) *Anwaltschafts- und Revisionsverein des Tiroler Genossenschaftsverbandes* (Innsbruck) with 307 societies (Audit, legal defence);

(15) *Verband landw. Genossenschaften in Vorarlberg* (*Bregenz*) with 146 societies (legal defence, financial operations, trade in products).

These agricultural co-operative federations have all been founded as co-operative societies registered with unlimited liability, with the exception of the *Anwaltschafts- und Revisionsverein des Tiroler Genossenschaftsverbandes* established under the form of an association (*Verein*). According to § 3 of the amended rules of the General Federation, dated 19 December 1930, other agricultural associations (*Körperschaften*) may also exceptionally be admitted as members if their inclusion is considered to be in the interests of Austrian agricultural co-operation.

For the discussion and elucidation of the various co-operative questions there have been in existence since 1928 within the General Federation, five special committees consisting of representatives of the different national federations. Four of these deal respectively with: co-operative audit, financial operations, trade in products, handling of milk; and a technical Committee deals with proposals for amendment of co-operative law and the law on audits.

The activity of the General Federation may be illustrated by means of a few figures. The combined balance sheet of the member federations undertaking financial operations and trade in products showed as follows at the end of 1932:

Liabilities:

Shares: 3,029,000 sch. with an aggregate guarantee of 67,426,000 sch.

Reserves: 2,701,000 sch.

Deposits in hand: 57,656,000 sch.

Savings deposits and deposits on current account (end of 1930): 83,385,000 sch.

Owed by federations for goods received and bank debts: 20,003,000 sch.

Assets:

Deposits in financial institutions: 8,697,000 sch.

Loans, including sums owed to federations for goods supplied on credit: 59,468,000 sch.

Securities and stocks held: 7,002,000 sch.

Real property, including inventory, furniture, etc.: 3,978,000 sch.

The balance sheet total for 31 December 1932 showed: 91,326,000 sch.

Before the war the *Allgemeiner Verband der landwirtschaftlichen Genossenschaften* was a member of the *Internationaler Bund der landw. Genossenschaften* the headquarters of which were at Berlin, which ceased to exist after 1913. At present the General Federation is a member of the International Committee of Agriculture

of Paris and of its Sub-Committee for agricultural co-operation. It is also a member of the Permanent International Committee of Agricultural Associations attached to the International Institute of Agriculture at Rome.

§ 5. — The credit societies (savings and loans banks).

The activity of the agricultural co-operative societies takes in Austria as in other countries a great variety of forms, but the prevailing type as also in Central Europe generally, is that of the Raiffeisen banks. The object of these banks which according to their rules are based, as has been stated, on the principle of unlimited liability, is to improve the position of their members by granting them loans for current cultivation needs, business operations and general requirements. These loans are granted within the limits fixed by the general meeting of members and by decision of the Executive Committee. As a general rule the banks cannot grant long term mortgage loans, at most for one or two years only, and these must always be at call, the intention being to ensure the possibility of liquidating the credits at any time. Current accounts may be opened for members doing thriving business.

Before granting a loan the bank must ascertain whether the applicant offers the necessary financial security and if he is creditworthy, and further enquire into the purpose for which the sums lent are intended, while fixing the terms of repayment in accordance with these objects. Loans, including credit on current account, must be guaranteed adequately, so that no risk is entailed for the credit institution. The guarantee may be supplied by offering security, depositing bonds or mortgages. All business involving risk is avoided in the conduct of the banks' affairs. The law prescribes that the operations of the bank must extend only to one or more communes, since in this way the bank has the security in that the inhabitants of the same commune are liable to the same vicissitudes of fortune, and on the other hand it is always possible for the bank authorities to make themselves acquainted with the personal situation of the individual members in the small circle concerned.

Loans are made against properly established documents of acknowledgement, and credits on current account allowed with the conclusion of special agreements. Under § 64 of the rules, bills of exchange are unconditionally excluded in any grant of loans to members. At the present time, however, it is being widely discussed in co-operative circles whether, in view of the serious economic situation, and following the practice introduced into Czechoslovakia, the bill of exchange might not be obtained by the society from the appropriate Federation and discounted for the purpose of procuring the ready money required. The Auditors' Conference held at Salzburg in the month of September 1933 passed a unanimous resolution requesting the Executive Committee of the General Federation of Agricultural Co-operative Societies to make a thorough examination of the question of the bill of exchange as a negotiable instrument.

In order to fulfil its role as village bank, the credit society obtains its funds in the following ways: in the first place, from the members' shares, each member being expected to subscribe at least one share. No member may hold more than

25 shares in the credit society. The shares must be paid up in ready money at the time the member is admitted, and are not transferable. In the event of the dissolution of the society the shares are repayable according to the funds available after meeting the demands of the creditors. In the second place funds are obtained from the deposits accumulated which can be accepted from any source and consequently not only from members.

Statistical enquiries show that more than half and sometimes more than 60 per cent. of the total deposits made at the Raiffeisen banks come from persons engaged in local industry, trade, from workmen, etc. This is further proof of the great confidence enjoyed by these societies, not only among the agricultural population, but among the rural population in general. " It has never been denied," to quote the *Oesterreichische landwirtschaftliche Genossenschaftszeitung* of 21 February 1934, " that our Raiffeisen banks were founded above all for the rural population among which the farming class always bulk large. It would however be a great mistake to exclude work people and employees, artisans and dealers. It is only by the support and full equality of rights of all the producing and working classes, that our Raiffeisen banks can fulfil their mission as popular banks, and that an assurance in obtained of healthy progress. "

In the third place, the Executive Committee is authorised to contract loans, according to requirements, within the limits established by the general meeting. Finally a source of receipts is provided by the entrance fee, which must be paid by each member as a contribution to the costs of administration. This charge is not reimboursed, in the event of the members's withdrawal from the society and remains the property of the society.

The foundation of the Raiffeisen banks took place everywhere before the war with the active co-operation of the State, or of the administrations of the province (Diets). When it was recognised that these small groups of the farming population, established on a corporative and co-operative basis, proved to be of great importance, not only for the social development of the farming class, but also as an economic factor of the general agrarian policy, the setting up of these banks was encouraged by means of foundation capital, subsidies and loans free of interest, etc. This is also true of the whole movement of agricultural co-operation, but in particular of the co-operative credit societies, since the economic importance of cheap credit to the country is very great and of general application. In respect only of material support afforded by foundation capital, a special credit item has since 1899 appeared in the State budget annually for nearly 1 million crowns for this purpose. The Ministry of Agriculture formed in connection with the *Landeskulturräten* (Provincial Councils of Agriculture) special committees for the business of agricultural co-operation, and endeavoured, in conjunction with the diets of the provinces and with the assistance of the political authorities and the agricultural corporations, to popularise the co-operative idea in the rural areas.

From the standpoint of the principle of the purity of the co-operative idea, or the self-help principle, which lies at the basis of the societies, this State financial aid, pushed somewhat too far, was considered by the champions of the co-operative system as an encroachment on the side of the authorities and was described

as a misconception of the co-operative idea, that is to say, of co-operative initiative and independence. The demand was rather for the largest possible measure of neutrality on the part of the State. " Agricultural co-operation in Austria, " says Prof. Grünfeld in his *Handbuch des Genossenschaftswesens*, 1928, Vol. 1, p. 132, " in spite of Raiffeisen and Kampelik, has been in the main a matter of official propaganda, which over a long period kept agricultural co-operation in a state of dependence. Not only were the receipts of the associations up to nearly one half based on State revenues, but the audit was carried out by State officials. "

The subsidies which the Raiffeisen banks had received from the State completely ceased with the outbreak of war, and the co-operative societies were informed, by the Minister of Agriculture, in the Decree of 2 August 1914, that they were henceforth dependent on their own resources only and must count only on these. The policy of subventions was, however, renewed after the war and undoubtedly in the interests of the societies themselves. Dr. Schandl recently expressed himself as follows at the Fourth International Conference of Agricultural Credit held at Budapest in June 1934, in reference to the countries of Central Europe generally: " It is not that the co-operative societies request State support or credit funds placed at their disposal by the State, for, in principle, it is much more desirable that the agricultural credit societies should maintain their independence towards the State. It is however obvious that, in exceptional times when even the large financing institutions receive material support from the State in order to fulfil the operations of public interest which fall to them to carry out, the credit co-operative societies could not refuse to undertake, on the request of the State, operations of public interest, and in this case it is clear that they also require the material support of the State. When these exceptional times are passed, the agricultural co-operative credit societies will have to return to their principle of independence, that is to say to a purely co-operative basis, attending exclusively to the interests of the formation of capital and the supply of credit to their members, and that without any assistance from the State. It is perhaps unnecessary to emphasise that as State support there could not be considered the fact that banks of issue allow to the central organisations of the co-operative credit societies rediscount credits on the same conditions as are allowed to other financing institutions. "

The economic importance of the Raiffeisen banks diminished somewhat during the war. It is true that savings deposits rose from 151,000,000 crowns in 1916 to 252,000,000 crowns in 1918, and sums loaned from 10,000,000 in 1915 to 21,000,000 in 1919, but in view of the devaluation of the crown a somewhat illusory prosperity only is shown by these figures. With the devaluation of the currency (in February 1916 a gold crown was exchanged for 1.51 paper crowns, and on 28 August 1922 for 17,000 paper crowns) these banks lost in the post-war period much of their capital. The investment of funds in the War Loan especially resulted in heavy loss, *viz.*, 336,000,000 crowns. So long as the inflation lasted, the Raiffeisen banks could hardly fulfil their function as banks of the rural population to any adequate extent. It was only as a result of the stabilisation of the currency in 1922 together with

the foundation of the National Bank of Austria with the exclusive right to issue bank notes (with a share capital of 30,000,000 crowns) and the duty of ensuring the stability of the currency, and also thanks to loans from the League of Nations that it became possible to introduce, into the co-operative societies also, gold balance sheets and in this way to restore their vitality.

As will be remembered, the League of Nations made to Austria on 4 October 1922 a loan of 650,000,000 crowns for twenty years intended for the consolidation of the budget in the years 1923 and 1924. With the re-establishment of order in the federal finances at the end of 1924, there remained a residual loan of nearly one third of the original loan. Austria approached the League with a request for the free gift of this sum for the carrying out certain economic investments, which was granted. A special importance attaches to the contributions from this loan employed for the development of the Raiffeisen banks, the successful activity of which depended to a decisive extent on the reliance of the whole of the rural population on the preservation of the purchasing power of the schilling, It proved practicable to re-establish the national currency, which had already fallen abroad to one third of the national value. The Austrian schilling after having depreciated by about 21 per cent. during the winter of 1931-32, has proved up to now to be one of the most stable currencies of the world.

In a number of decrees and ordinances of the Federal Ministry of Finance account was taken of the special and well justified wishes of the co-operative circles, as regarded the transformation of their balance sheets into gold values. The majority of the co-operative societies and federations established their gold balances on 1 January 1925, the others on 1 January 1926, a decree of the Federal Government having introduced the Austrian schilling as the obligatory currency as from 1 January 1926.

The development of the Raiffeisen banks appears from the following figures which characterise the main results.

Development of the Raiffeisen Banks during period 1924-1932.

Year	Number of Raiffeisen Banks	Total in savings deposits (1000 sch.)	% of the returns of the last prewar year on which returns were taken	Total of loans and credits on current account (1000 sch.)	% of the returns of the last prewar year for which returns were taken
End 1924	1,728	70,200	17.0	41,400	16.5
» 1925	1,687	118,100	26.6	75,500	30.2
» 1926	1,713	151,300	36.7	113,000	35.0
» 1927	1,718	197,300	47.8	157,600	63.0
» 1928	1,754	257,600	62.5	200,200	80.0
» 1929	1,772	305,800	74.2	243,500	97.4
» 1930	1,782	333,500	80.9	279,500	111.8
» 1931	1,792	318,700	77.3	289,100	115.6
» 1932	1,795	302,227	73.2	269,202	107.3

The number of the banks has increased from year to year, but the rate of increase has been relatively slow. It appears that the foundation of the banks has already reached something of a saturation point, but that they are so solidly constructed as to prove capable of withstanding liquidation in unfavourable years. Naturally the needs of the time have frequently contributed to bringing about co-operative association of the farmers.

As appears from this table, the savings deposits have perceptibly increased, from 17 per cent. only of the pre-war situation in 1924 they reached by 1930 nearly 81 per cent. of that level, although in 1932 they dropped again to 73.2 per cent., a fall in part due to the collapse in October 1931 of the *Kreditanstalt* and the somewhat shattered confidence of the depositors. At the same time the total of the loans at the end of 1930 already perceptibly exceeded the pre-war total and points to a higher indebtedness of the farmers with the Raiffeisen banks than before the war. The loans in fact in 1924 formed 16.5 per cent. of the pre-war total, and 107.3 per cent. in 1932, as compared with 115.6 per cent. in 1931.

The relation between the Raiffeisen banks and the number of political communes and the total of deposits and loans at the banks in the different Provinces of the Republic is shown as follows for 1 January 1933:

Provinces	Number of Raiffeisen banks	Number of political communes	Savings deposits and deposits on current account (1000 sch.)	% of the last pre-war year for which returns were taken	Total of loans and credits on current account (1000 sch.)	% of the last pre-war year for which returns were taken.
Burgenland	116	325	11,100		12,200	—
Carinthia	189	240	13,800	56.3	13,700	72.8
Lower Austria	577	1,720	87,300	72.5	75,500	132.2
Upper Austria	284	507	60,300	88.2	54,100	124.0
Salzburg	75	157	10,100	96.0	18,700	127.2
Styria	279	1,030	40,800	83.7	43,600	96.9
Tyrol	190	309	14,000	49.4	38,100	96.9
Vorarlberg	85	89	20,300	60.0	18,400	58.0
Total	1,795	4,395	302,700	73.5	274,000	109.6

As appears from this table, the majority of the Raiffeisen banks are found in Lower Austria, where at the end of 1932 they numbered 577, or nearly one third of the total number. Next came Upper Austria and Styria with respectively 284 and 279 Raiffeisen banks; Tyrol and Carinthia with respectively 190 and 189; Burgenland with 116, Vorarlberg with 85 and Salzburg with 75. The ratio between the number of banks and that of the political communes is however most favourable in Vorarlberg, where nearly every commune has its own bank; it is most unfavourable (about 1 to 3) in Lower Austria where taking the absolute number the banks are most widely diffused, and also in Styria where the number of the existing banks is also fairly large, but the ratio is only 1 to 5. The number of banks is thus smaller than that of the

communes. Many banks extend their activity to several communes at the same time, in a sense contrary to the Raiffeisen principle, which is that of encouraging the limitation of the area of the bank operations.

The financial resources of these banks are most apparent in the four largest of the federal provinces, Lower Austria, Upper Austria, Styria and Tyrol, while Carinthia, which in territorial area and in number of banks occupies the fifth place, can claim only the seventh from the standpoint of the total of its deposits and loans. The reasons of the diversity of financial resources of the co-operative banks are naturally very varied. From the whole nexus of causes one element may here be disengaged, *viz.*, the differing agrarian structure in two federal provinces with about the same number of banks, Carinthia and Tyrol, and an endeavour will be made to place this element in relation with the total assets and liabilities in these two provinces.

	Carinthia	Tyrol
Number of farms	30.663	26.472
Less than 1 ha	3.240	2.131
1-2 »	2.730	2.655
2-5 »	5.154	6.856
5-10 »	4.491	5.625
10-10 »	5.671	4.172
20-50 »	6.360	3.159
10-100 »	1.859	934
100-200 »	732	384
200-500 »	277	282
500-1000 »	87	129
over 1000 ha	62	145

A comparison of the different size categories of the farms in the two provinces proves that, although Carinthia has a smaller agricultural area than the Tyrol, it has over 4,000 farms more than the latter, some 1,200 of this excess however being farms of under one hectare which are any way of less importance for agricultural co-operation. In the Tyrol on the other hand there are in the size classes going from 2 to 20 ha. about 1,400 farms more than there are in Carinthia in the same size categories. It is precisely these farms which, in virtue of their economic structure, have in the first place a decisive influence on the development of agricultural co-operation and to which it is also due that in Carinthia where the total number of farms is higher, none the less the economic resources of the Raiffeisen banks (deposits and loans) are lower than they are in the Tyrol.

In order to be able to examine thoroughly the question of the varying extents of the assets and liabilities of the Raiffeisen banks, it will be essential naturally, to take into account many other factors, cultural, economic and social. There is, it is clear, a very extensive sphere for investigations of the co-operative system which would have a certainly considerable scientific interest.

It is only the discovery of the manifold causes of this relation that can enable us to gain an insight into the real character of the effect of co-operation on agriculture.

With a view to bringing out more clearly the success achieved by the Raiffeisen banks, these banks may here be compared with similar credit institutions intended for the accumulation of small savings, *viz.*, the savings banks. The deposits in the Austrian savings banks amounted in 1932 to 1,064,000,000 schilling, of which 125,000,000 schilling were in post office savings banks. By April 1934 this amount had diminished to 1,044,000,000 schilling, the post office savings however having increased to 141,000,000 schilling. The savings deposits in the Raiffeisen banks, which amounted at the end of 1932 to over 302,000,000 schilling thus constitute only about one third of the savings bank deposits.

The following facts should however be borne in mind: the first savings banks in Austria were already founded at the beginning of the XIX century in the year 1819 at Vienna on the model of the Paris savings banks; that they were mainly established in the towns with a much more extended area of operations, and, that by the law of 1844, when there were still no Raiffeisen banks in existence, their deposits had gained the right of being considered as investments for trust moneys. The deposits of trust funds are in consequence guaranteed in law by the guarantee of the State or of self-governing bodies. The Raiffeisen banks although legally organised on well defined principles and exercising their bank operations on a basis of unlimited liability, have obtained only after many years' effort in 1933 the rank of trustee investments for their funds. By announcement of the Federal Ministry of Finance of 20 December 1933, trust moneys may from 1 January 1934 be invested in the Raiffeisen banks as an interest-bearing deposit within the limits prescribed for deposits in State savings banks. Notification of the Raiffeisen banks empowered to accept deposits of trustee funds is published by the Ministry of Finance. In the first instance 928 Raiffeisen banks were recognised for the purpose, including 564 in Lower Austria and 104 in Burgenland. This recognition confers on the farmers' co-operative credit banks a valuable right which assimilates them to the State savings banks.

Loans made by the Raiffeisen banks constitute as a rule, according to C. Schandl, one fourth of the total agricultural short term indebtendness in Austria, nearly as much as in Hungary and in Czechoslovakia.

In regard to the development of owned capital—shares in the business and reserve funds—and to the total turnover of the Austrian Raiffeisen banks partial statistics only are available as shown below.

The ratio existing between the owned and the borrowed capital at these banks cannot be regarded as favourable. While in Austria the law on co-operation has rendered obligatory the creation of shares, the tradition of the Raiffeisen banks is quite contrary to this. It is well known that Raiffeisen was entirely opposed to the accumulation of shares, and in this his view differed markedly from that of Schulze Delitzsch. To quote the words of Wygodzinski, " His moral convictions held in horror all that resembled profit-making. " The

Amount of Owned and Borrowed Capital and Ratio between the two types of Capital in 1932 (schilling)

Provinces	Owned Capital		Total	Borrowed Capital	Ratio of owned to borrowed capital %
	Shares	Reserve Funds		Deposits on current account	
Burgenland	209,986.80 (1931)	557,445.83 (1931)	767,432.63	12,200,000	6.29 %
Carinthia	129,451.06	1,307,616.49	1,437,067.55	13,400,000	10.73 »
Lower Austria	192,355.94 (1929)	2,338,243.05 (1929)	2,530,598.99	75,500,000	3.35 »
Upper Austria	128,241.00	2,821,845.00	3,073,327.00	54,100,000	5.68 »
Salzburg	23,888.00	894,332.29	918,220.29	18,700,000	4.91 »
Styria	100,990.00 (1931)	2,645,102.74 (1931)	2,746,092.74	43,600,000	6.30 »
Tyrol	199,300.00	2,438,759.26	2,638,059.26	38,100,000	6.92 »
Vorarlberg	94,825.27	1,429,821.41	1,524,646.68	18,400,000	8.29 »

majority of the Raiffeisen banks have actually very few shares for subscription. It is true that even before the war in 1909 the ratio of the owned to the borrowed capital, expressed in percentage, was quite small.

	Owned Capital	Borrowed Capital
Lower Austria	3.1	96.9
Upper Austria	4.4	95.6
Salzburg	2.8	97.2
Styria	3.55	96.2
Carinthia	4.1	95.9
Tyrol and Vorarlberg	2.4	97.6

The policy in regard to interest in the Raiffeisen banks is evidently an important factor in increasing the deposits. The rate of interest on deposits was in 1931 on an average 6.42 per cent. and in 1932 was 5.88 per cent. The rates for loans were in the years in question 8.63 and 8.05 per cent. The disproportion between the interest on these credit transactions and the return from farming is thus quite perceptible; as early as 1930 the interest return on capital invested in agriculture was, according to the investigations of the Austrian provincial accountancy offices, only 1.4 per cent., and will most probably have dropped still lower at the present time.

On 1 July 1934 the following provisions were announced fixing the maximum rate of interest on the savings deposits in the Raiffeisen banks. The Raiffeisen banks and other co-operative credit societies subject to audit carried out by a recognised federation or by the Government of a province, may pay 4 per cent. interest for deposits, provided that their headquarters are situated in communes where there does not exist either a savings bank or bank such as a banking share company or a society with limited liability carrying on any form of banking business. Where on the other hand a savings bank or ordinary bank exists,

the Raiffeisen banks may pay an interest at 3 $^7/_8$ per cent. up to 31 December 1934 and from 1 January 1935 at the rate of 3 $^3/_4$ per cent. These rates are lowered by $^1/_4$ per cent. for Raiffeisen banks and other co-operative credit societies which are not subject to audit. With a view to preventing any exceeding of the rate of interest, a law has been enacted by the Ordinance of 17 March 1933 directed against exploitation of persons requiring credit, and, *inter alia*, provision has been made for the dissolution of credit societies that are guilty of having demanded too high a rate of interest.

The Raiffeisen banks, as already noted, administer a very considerable proportion of the national income, and their working has a profound influence on farming; they form in consequence an indispensable part of the organisation of credit in Austria. During the crisis a credit organisation firmly established on the basis of the Raiffeisen principles has a greater importance than ever, for it is only by means of a well organised credit that it will be possible to improve the situation of agriculture in an economic period during which the farming costs have greatly exceeded the prices of agricultural products.

M. TCHERKINSKY.

(To be continued).

BIBLIOGRAPHY ON ECONOMIC AND SOCIAL QUESTIONS

ACERBO Giacomo: La economia dei cereali nell'Italia e nel mondo. Milano, Hoepli, 1934-XIII, pp. IX + 1021.

[Among the problems constantly engaging the attention of students and of Governments in the present critical phase of agricultural economy the cereal problem occupies a chief place. This is due not merely to the fact that cereals constitute the primary basis of human existence and supply also an abundant share of the essential animal feeds, but also to the fact that the economy of a great number of farms is so to speak centred on cereals and that accordingly a large volume both of capital and of labour is involved. The importance will be at once recognised of this branch of farming under the technical, economic, social and political aspect, and also the necessity for studying it from these various standpoints. This necessity is more than ever felt at the present time when the various elements and factors of the process of production are more closely interrelated and interlocked, the one frequently operating as a function of the others. The new planned economy and the new commercial policy have modified the natural bases of production and of trade, introducing a system in which price formation is no longer subject to the free play of supply and demand, but to the action of a number of other factors, including even factors of an extra-economic order, with the result of bringing about a market situation extremely precarious and not easy to control. Hence a re-examination is indicated of the whole system of the cultivation and economy of cereals and its adaptation to the changed conditions.

The work of Prof. Acerbo, Minister of Agriculture of the Kingdom of Italy during a period of more than five years amply supplies the data necessary for this purpose. It includes an introduction, " Le caratteristiche generali dei cereali " (pp. 1-36); a general section, " I cereali nel mondo " (pp. 37-334), and a special section, " I cereali nell'Italia " (pp. 335-1009). Four bibliographies are included,

containing particulars of fully 2400 publications. The two parts of the volume are divided into sections dealing respectively with historical data and with present day conditions of the economy of cereals. The writer analyses these conditions—for the separate countries—in their interrelations, bringing the story down through the different epochs from the most remote to the present day; he then discusses the general economic, botanical and biological characteristics of each cereal.

There is a very full treatment of the origin and propagation of the cereals in the various countries.

From the data on area, production, trade, consumption and prices a clear indication results of the zones of greatest intensity of cultivation, of highest technical progress, and of largest consumption, and accordingly a closer definition of the main currents of trade on which the commercial policy of the various countries is based. In this connection the author examines the measures adopted by the separate producing States, whether exporting or importing, in favour of cereal cultivation, showing that as at the present day the policy of the cereal trades has been extremely variable.

Of basic importance is the section relating to Italy, where the different crops are studied from the point of view of production, trade, consumption, prices, from pre-Roman times to the Imperial age, the mediaeval Roman-barbaric and the Italic, up to modern times.

A special chapter is devoted to forage crops, which have important correlations with the economy of cereal cultivation and an influence upon it.

The value of this remarkable work by Prof. Acerbo is, *inter alia*, that it gives a complete survey of this all important branch of agrarian economy and forms a guide for the study of the subject, making unnecessary the consultation, not always feasible, of numerous special works of every country).

G. C.

PUBLICATIONS RECEIVED BY THE LIBRARY

Books.

General Works.

ALMANACCO ITALIANO. Piccola enciclopedia popolare della vita pratica e annuario diplomatico amministrativo economico e statistico. v. XL, per l'anno 1935. Firenze, Bemporad, [1935], 761 p.

WHITAKER, J. An almanack for the year of our Lord 1935. London, 1935. 992 p.

Political Economics.

LOJACONO, L. Le corporazioni fasciste. Milano, Hoepli, 1935. XV, 341 p. (Studi giuridici politici economici e sociali).

MORTARA, G. La realtà economica: corso di lezioni raccolte a cura del Dott. Paolo Baffi con una appendice del Prof. Gerolamo Bassani su l'economia corporativa. Padova, « Cedam », 1935. 334 p.

Co-operation.

CO-OPERATIVE UNION LTD. 66th Annual co-operative congress 1934., held in the Pavilion, Rhyl Promenade, Rhyl, May 21st, 22nd, 23rd, edited by R. A. PALMER, 1934. Manchester, 1934. 753 p.

Prof. ALESSANDRO BRIZI, *Segretario generale dell'Istituto, Direttore responsabile.*

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THE IMPORTANCE OF FARM ACCOUNTANCY FOR THE STUDY OF CERTAIN ECONOMIC PROBLEMS IN AGRICULTURE

It is here proposed to give some examples of the contributions that may made by the results of farm accountancy to the study of certain economic problems of agriculture. In the first place use will be made of figures that have been supplied by the Brougg Accountancy Office with a view to showing that the accountancy results make it possible to calculate the gross returns of a whole country as well as the quantities of agricultural products consumed annually by the country in question. *It is a fact of capital importance that exact information can be supplied only by means of farm accountancy.* Naturally the information so gained must be supported from other statistics, and complete studies can only be made when the agricultural census is an accomplished fact, or when less fragmentary price statistics are available.

There can be no doubt that the *results of farm accountancy make it possible to carry out a whole series of far-reaching studies. If these results are supplemented by the data supplied by an agricultural census* – data relating to production and trade in agricultural products, head of cattle, etc. – *it becomes possible to find the answer to any question to which the farm enterprise may give rise.*

As demonstrated in connection with the first table in this article, farm accountancy provides a means for making quantitative estimates for animal production, estimates which are not to be found in any other form of statistical return. The same holds good if it is desired to describe quantitatively the results of transformation of crop products on the farm.

The results of farm accountancy can be studied to greatest advantage by employing the *statistical method,* which eliminates the influence of the personal equation of the farmer. This is the only method which gives good results whenever the conditions which have given rise to the phenomena considered are not completely known.

This method shows clearly how far the data are in agreement or otherwise, what tendencies are manifested in the evolution of farming conditions, and provides a means of gauging their intensity. The method integrates, controls and adds precision to any conclusions that may be drawn and provides a sound foundation for the framework of any future developments.

Where certain groups of farms are not truly representative of their environment, *it is sufficient that they should be invariable from the statistical standpoint for them* to be serviceable after the lapse of a sufficiently long period, since

(Continued on page 46)

Designation	Gross Return 1000 gold francs		
	Assigned to the market	Consumed by household	Total
Horses	—	—	5,836
Cattle. (live weight)	266,304	3,540	269,844
Fat calves » »	48,044	648	48,692
Milk	459,171	81,601	540,772
Pigs (live weight)	102,716	37,046	139,762
Sheep	—		2,496
Goats	-	-	3,309
Poultry, etc.	—	—	15,336
Bee keeping	7,717	1,965	9,682
Total . . .	883,952	124,800	1,035,720
Cereals	61,497	14,239	75,736
Potatoes	29,878	16,704	46,582
Vine production	43,023	5,611	48,634
Cider and fruits	112,236	35,691	147,927
Hay	--	- -	12,661
Straw and litter	—	--	4,3228
Other products	- -	---	34,402
Total . . .	246,634	72,245	370,264
Forests	—	—	47,058
Other branches	—	—	189,862
Products	206,002	109,880	—
Total . . .	1,336,588	306,925	1,643,513

(*) Live weight in metric quintals.
(1) Estimated according to the agricultural census and slaughtering returns.

931-32.

Unit of measure	Gross Yield 1000 units of measure			Harvested 1000 units		Net Imports 1000 units of measure	Consumption of Country 1000 units of measure
	Assigned to market	Consumed by house hold	Total	Transformed on farm	Total		
	—	—	—	—	—	—	—
qm.	1,522	20	1,542 *1,450*	—	1,763 (1) *1,731*	+ 193	1,956 *1,901*
»	218	3	221 *281*				
»	20,228	3,595	23,823	3,807	27,630 (2) *26,010*	— 270	23,553
»	500	213	803	—	803 *783*	+ 26	829 *816*
head	—	—	40	—	93	+ 30	123 (*) *86*
»	-	—	53				
»	—	—	—	—	—	—	—
qm.	21	5	26	-	26	+ 3	22 *27*
qm.	1,818	421	2,239	98	2,337	+ 11,155	13,394 (3) *6,694*
»	2,567	1,435	4,002	3,498	7,500	+ 732	4,734 *4,600*
»	517	67	584	—	584 *525*	+ 1,243	1,827 *1,844*
»	—	—	—	—	—	—	—
»	—	—	1,538	—	—	—	—
»	—	—	—	—	—	—	—
»	—	—	—	—	—	—	—
	—	—	—	—	—	—	—
	—	—	—	—	—	—	—
	—	—	—	—	—	—	—

(2) Estimated according to the unit yield per cow.
(3) Breadstuff cereals only.

SWITZERLAND: YEAR

Designation	Gross Return 1000 gold francs Assigned to the market	Consumed by household	Total
Horses	—		2,968
Cattle (live weight)	165,991	3,952	169,943
Fat calves » »	37,681	900	38,581
Milk	438,976	77,169	516,145
Pigs (live weight)	90,098	32,661	122,759
Sheep	—	·	1,928
Goats			2,095
Poultry etc.	—	—	19,753
Bee keeping	4,655	1,449	6,104
Total	737,401	116,131	880,276
Cereals	63,031	12,172	75,503
Potatoes	29,074	16,101	45,175
Vine products	42,697	7,016	49,713
Cider and fruits	78,377	31,392	109,769
Hay	—		13,859
Straw and litter	—		3,107
Other products	—	—	28,502
Total	213,179	66,081	325,028
Forests	—	—	43,143
Other branches	—	—	208,757
Products	196,899	127,213	—
Total	1,147,479	310,325	1,457,804

(*) Live weight in metric quintals.
(1) Estimated according to the agricultural census and slaughtering returns.

1932-33.

Unit of measure	Gross Yield 1000 units of measure: Assigned to market	Consumed by house hold	Total	Harvested 1000 units of measure: Transformed on farm	Total	Net imports 1000 units of measure	Consumption of Country 1000 units of measure
	—	—	—	—	—	—	
qm.	1,360	33	1,393	—	1,626	+ 46	1,672
		1	*1,410*		(1) *1,824*		*1,884*
»	228	5	233	—			
			314		—		
»	21,413	3,765	25,178	3,250	28,428	— 1,288	23,890
					(2) *27,868*		
»	700	257	966	—	966	+ 3	969
					920		*923*
head	-	—	36	—	75	+ 7	82
»	—	-	36	—			(*) *74*
»	—	—	—	—	—	—	—
qm.	13	3	16		16	+ 3	19
							14
qm.	2,019	399	2,418	-	2,418	+ 10,961	13,379
					2,355		(3) *5,702*
»	2,825	1,565	4,390	2,159	6,519	+ 607	4,997
							4,022
»	421	69	490	—	490	+ 1,347	1,837
							1,619
»	—	—	—	-	410	—	—
»	—	—	1,436	—	—	—	—
	-	—	—	—	—	-	—
	—	—	—	—	—	—	—
	—	-	—	—	—	—	—
	—	—	—	—	—	—	-
	—	—	—	-	-	—	—

(2) Estimated according to the unit yield per cow.
(3) Breadstuff cereals only.

it will then become possible to discern the reasons which have brought about a variation in the results. In this case what is known as the *monographic method,* such, as is used, for example, at Oxford, may be employed.

The agricultural census data, when available, should serve as the basis for determining the extension and localisation of systems of farming, of the management of farms and of conditions of farm work, *thereby rendering practicable a comparative study of the agriculture of different countries and of the economic forces which determine the action of farmers* (1).

When the groups of farms are sufficiently homogeneous, the accountancy results give average values and thus the influence of a number of disturbing factors is eliminated. The results will show the influence of altitude and climate; of the proportion existing between crops; of the prevalence of animal over crop production and vice versa; of the situation of farms in relation to the market; of the size of farms. etc. The agricultural census should facilitate such a classification of farms, or render it possible to see whether the groups are representative of farming conditions in a given country or region or in a particular category of farms.

Production and price statistics supply valuable information for determining elasticity of demand for agricultural products as also the capacity of agriculture for adaptation to temporary or prolonged variations of the prices of the different products (Dragoni). It is however essential to have at hand results over a certain number of years.

In a word, when reinforced by data drawn from other sources, farm accountancy is the sole means by which an exact statement can be attained as to the economic situation of the farms of a region, of a single size category, and following similar farming systems. All that is necessary is to have the results of a certain number of years and of a number of farms which may be considered as representative of their actual environment. For example, the accountancy results of a certain number of farms of Australia and of the Argentine Republic would give us precise information on the position of sheep farming in Australia and of wheat growing in Argentina.

THE GROSS RETURN OF AGRICULTURE AND THE CALCULATION OF THE CONSUMPTION OF FARM PRODUCTS.

The gross return is here given of Swiss agriculture for 1931-32 and for 1932-33, in thousands of gold francs. The calculation has also been made by the Brougg Accountancy Office and we have been able to note that the results obtained by ourselves are very close to those obtained at Brougg (2).

(1) DRAGONI Dr. Carlo, *Economia Agraria.* Ulrico Hoepli, Milan 1932.

(2) In order to calculate the gross return of the whole of Swiss agriculture, we have multiplied the figures per hectare supplied to us from the Farm Accountancy Office by the areas of all farms included in the size categories into which the farms supervised by the Office are divided, and have taken the total. We are not aware what are the methods of calculation adopted by the Brougg Accountancy Office, but the results reached are almost identical, the difference being negligible.

In the next place the consumption of the farm household has been established, and the proportion of the produce assigned for marketing. It should be noted that in the gross return there is no item representing products transformed on the farm, for example, hay, since otherwise such an item would appear twice, once as hay, and in another place under the form of milk or meat.

Later, there are shown, in thousands of units of measure or quantity, the part of the gross yields apportioned to the market, the part consumed by the farm household, and the total gross yield. This calculation has been made possible by the prices. The quantities transformed on the farm have been calculated by deducting from the quantities harvested, taken from the Swiss Statistical Year Book, the quantities which have given the gross return, the imports have been added and the exports deducted, and thus there has been obtained, in quantities, the whole consumption of farm products in Switzerland. The figures of the last column are those of this consumption as calculated by ourselves; above, in italics, will be found the consumption figures calculated at Berne by another method. *Our figures and those in italics are nearly identical;* a difference appears as regards sheep and goats, owing to the fact that we have shown the quantities in carcases and that the Swiss Office has shown them in live weight; a further difference will be noted in respect of cereals, as the Swiss Office only shows the breadstuff cereals and our figures include all cereals.

It seems superfluous to demonstrate the value of these figures on the international plane and to repeat that it is the accountancy results alone that make their presentation possible.

THE EARNING CAPACITY OF AGRICULTURE

Two examples have already been given of an enquiry which might be made on the profit capacity of each branch of agriculture of a country the accountancy results of which appear in *Farm Accountancy Statistics*. An endeavour may now be to compare certain countries among themselves; and, not to go further with the analysis, the variations in the net return may be followed in these countries from 1928-29 to 1930-31. To facilitate comparison a common measure may be chosen. We may reduce to 1 the net return obtained in 1928-29 in each of the countries under review and will then enquire what is the amount of the expenditure needed to obtain this franc of net return. When the net return diminishes, we shall enquire whether it is the farming costs that have increased or if it is the gross return which has decreased; or rather whether the gross return has decreased to a greater extent than the farming costs. We may establish the components of the gross return the variations of which have caused the variation in the return, and among the farming costs, the components which have varied.

On the following two pages will be found tables showing fluctuations of the net return, as well as of the gross return and the farming costs, in Switzerland, Denmark and Germany from 1928-29 to 1930-31.

To obtain one franc of net return, the Swiss farmer must spend 5.74 francs, the Danish farmer 4.50 fr, and the German 13.54 fr., in 1928-29. In Switzerland

Countries	Years	Gross return for one franc of net return in 1928–29							Net return (1)	Farming costs for one franc of net return in 1928–29						
		Stock breeding of slaughter cattle, etc.	Milk and milk products	Pigs	Cereals and root crops	Arboriculture and viticulture	Other branches	Total		Total	Labour	Fertilisers	Seeds and fodder	Taxes	Other expenses	Depreciations
SWITZERLAND . . .	1928-29	1.25	2.51	0.53	0.52	0.75	1.18	6.74	*1* —	5.74	3.01	0.11	0.74	0.15	0.94	0.79
	1929-30	1.41	2.43	0.65	0.49	0.77	1.23	6.98	*1.37*	5.61	2.89	0.13	0.76	0.16	0.94	0.73
	1930-31	1.67	2.21	0.72	0.42	0.49	1.18	6.69	*1.30*	5.39	2.82	0.11	0.74	0.14	0.88	0.70
DENMARK	1928-29	0.44	2.06	2.10	0.34	—	0.56	5.50	*1* —	4.50	1.68	0.19	1.80	0.17	0.66	—
	1929-30	0.46	1.97	2.10	0.17	—	0.59	5.29	*0.87*	4.42	1.70	0.21	1.68	0.16	0.67	—
	1930-31	0.38	1.66	1.42	0.13	—	0.53	4.12	*0.07*	4.05	1.59	0.20	1.43	0.17	0.66	—
GERMANY	1928-29	1.72	2.59	1.58	4.52	—	4.13	14.54	*1* —	13.54	6.23	1.13	1.61	0.76	3.09	0.72
	1929-30	1.73	2.55	1.80	4.67	—	3.09	14.41	*0.90*	13.54	6.28	1.15	1.51	0.72	3.17	0.71
	1930-31	1.54	2.28	1.26	4.43	—	3.41	12.92	*0.64*	12.28	5.93	0.98	1.27	0.61	2.78	0.71

(1) The net return of 1928-29 has been taken as equal to 1.

Country	Year	Increase (+) or decrease (—) from 1928 29 to 1929 30 and from 1928 29 to 1930 31 of gross return for 1 franc of net return: Stock farming for slaughter etc	Milk and milk products	Pigs	Cereals and root crops	Other branches	Total	Increase (+) or decrease (—) from 1928 29 to 1929 30 and from 1928 29 to 1930 31 of the farming costs for one franc of the net return: Labour costs	Purchases of fertiliser	Purchases of stock feeds	Other expenses	Depreciations
SWITZERLAND	1929 30	+ 0 16	− 0 08	+ 0 12	− 0 03	− 0 07	+ 0 24	− 0 13	− 0 12	+ 0 02	+ 0 02	− 0 05
	1930 31	+ 0 42	− 0 30	− 0 19	− 0 10	− 0 26	− 0 05	− 0 35	− 0 19	± 0 00	± 0 00	− 0 16
DENMARK	1929 30	+ 0 02	− 0 09	± 0 00	− 0 17	+ 0 03	0 21	− 0 08	+ 0 02	+ 0 02	− 0 12	± 0 00
	1930 31	− 0 06	− 0 40	− 0 68	− 0 21	0 03	1 38	− 0 45	− 0 09	+ 0 01	− 0 37	− 0 16
GERMANY	1929 30	+ 0 01	− 0 04	+ 0 22	+ 0 15	0 44	0 10	± 0 00	+ 0 05	+ 0 02	− 0 10	− 0 03
	1930 31	− 0 18	0 31	− 0 32	0 09	− 0 72	− 1 62	− 1 26	− 0 30	− 0 15	− 0 34	− 0 47

Country	Year	Increase (+) or decrease (—) of volume and prices of agricultural products per 1 franc of net return: Beef kg	Beef Price	Milk kg	Milk Price	Pork kg	Pork Price	Wheat ql	Wheat Price	Potatoes ql	Potatoes Price
SWITZERLAND	1929 30	− 14	+ 0 05	+ 11	0 01	− 7	+ 0 15	− 0 40	+ 0 08	+ 32 80	+ 0 73
	1930 31	− 31	+ 0 15	− 16	− 0 03	+ 6	+ 0 59	− 3 70	− 0 33	− 19 90	+ 0 37
DENMARK	1929 30	− 28	+ 0 28	− 30	− 0 01	− 10	+ 0 26	0 60	− 2 83	− 21 40	− 2 47
	1930 31	− 58	+ 0 11	− 209	− 0 07	3	− 0 12	− 2 00	− 9 35	− 43 00	− 1 57
GERMANY	1929 30	+ 5	− 0 01	− 54	0 01	− 11	+ 0 08	+ 1 70	+ 4 03	− 3 50	+ 2 10
	1930 31	+ 2	− 0 11	− 95	± 0 00	− 10	− 0 47	− 2 40	+ 5 49	+ 23 00	+ 0 87

out of 5.74 fr. of farming costs, 3.01 fr. represent labour costs; in Denmark out of 4.50 fr. of farming costs, 1.68 fr. represents labour costs and 1.80 fr. represent expenditure on purchases of feed; and in Germany, out of 13.54 fr. of farming costs, 6.23 fr. represent labour costs and 3.09 fr. ordinary expenses. *It appears that the more the farm is engaged in live stock production, the less high are the farming costs.*

In 1928-29, out of 6.74 francs of gross return in Switzerland 2.51 fr. represent milk and 1.25 fr. represents increase in cattle; in Denmark out of 5.50 fr. of gross return, 2.10 fr. represent gross return on pig keeping and 2.06 fr. gross return on dairy production; in Germany it is the cereals and root crops which, for one franc of net return, have given the highest gross return (4.52 fr.), next come the other arable crops and finally milk (2.59 fr.).

In 1929-30, the net return shows an increase in Switzerland: for one franc of net return in 1928-29, the gross return increases by 0.24 fr. and the farming costs diminish by 0.13 fr., the labour costs alone diminishing by 0.12 fr. The increase in the gross return is due to the increase in production and prices of pork, and similar increases in respect of beef. The gross return of dairy products diminished because the price of milk had fallen.

In 1930-31, the net return was higher in Switzerland than in 1928-29 and ess high than in 1929-30. From 1928-29 to 1930-31, the farming costs decrease by 0.35 fr. for one franc of net return in 1928-29; this decrease concerns the labour costs, repairs and depreciations and ordinary expenses. The gross return has decreased, but by 0.05 fr. only, per one franc of net return; and for this reason the net return remained higher than in 1928-29. This decline in the gross return is due to the decline in the gross return of dairy production, cereals, root crops and other crops. In Switzerland, a beginning was made in a larger production of beef, that of pork remained stationary, while later, prices firmed as well as those of beef.

The fluctuations in the production and prices of animal products require some explanation. The following statement was made in the article on farm accountancy which appeared in the *Monthly Bulletin of Agricultural Economics and Sociology* for September 1934, p. 369: " In 1928 the frontier was closed by the Federal Council; the following year prices rose by 7 per cent., and production increased by 13 per cent.; the gross return of this branch rose by 20 per cent. As there was an increasing demand for pigs, imports were increased without spoiling the sale of home bred pigs, as prices were still going up by 10 per cent. There is a great similarity between the cattle and the pig markets. The frontier was practically closed to imports in 1928 and completely so in 1929. This brought about a rise in prices and a resumption of imports in 1930, without affecting the gross return. It was due to the cattle breeding and pig fattening that, in spite of the fall in milk prices and in prices of crop products, the gross return showed but little fall in 1930-31."

In Denmark for 1 franc of net return the gross return drops in 1929-30 by 0.21 fr., the farming costs by 0.08 and the net return by 0.13 fr. as compared with 1928-29. The decrease in farming costs in due to the diminution of expenditure for feeds. The larger decrease in gross return is due especially to the fall in

production and prices of crop products; the production of pork and beef decreased in 1929-30 but the prices rose and the gross return remained nearly at the 1928-29 level. The dairy production increased, but the prices fell, and the gross return of this branch was accordingly less.

In 1930-31, the net return fell almost to zero. The costs diminished by 0.45 fr. as compared with those of 1928-29, a diminution due almost entirely to decreased expenditure in purchases of stock feeds, a decrease of 0.37 franc. The gross return was less by 1.38 franc. It is the price decline, especially in pork and milk, which lowered the various gross returns which were components of the total gross return. The dairy production has even increased to a very large extent but the price fall has brought down the gross return on this branch also.

On p. 366 of the article previously quoted the following statement appears: " Denmark had been able to increase, from 1928-29 to 1930-31, the export of butter, and except in 1930-31 when the prices had fallen too low, the gross return from the dairy production was higher than in 1927-28. In 1928-29 pig prices rose, with the result that in 1929-30 the import of porkers was multiplied tenfold; this was an excessive importation and was followed by a slackening in the sales, and in 1930-31 there was a severe fall in market prices and accordingly in the gross return from pig farming."

In Germany, the net return in 1929-30 shows a slight diminution. The farming costs remain at the same level as in 1928-29. The gross return is diminished in the same proportion as the net return, and the return of the dairy production and that of the " various branches " also diminished.

In 1930-31 the net return shows a larger proportional diminution than in 1929-30 as compared in each case with 1928-29. The case is one of a marked decrease in farming costs and a still larger one in gross return. All components of the farming costs show a diminution, especially repairs, depreciations and ordinary expenses.

Along with the gross return there is a decrease in the return from dairy production, from pig breeding and of the item designated as " various branches. " Milk prices remained the same as in 1928-29 but the production has greatly decreased. Pig prices show a very considerable drop.

It was noted in the article already quoted that in Germany there was a lower yield of dairy products. In 1928 Germany became an exporter of pigs, but in 1930 there was a decline in exports and prices were lower. Wheat prices increased in 1930, yields from root crops were very good, and the gross return improved.

The fluctuations are due to very various causes. On the one hand the farming costs must be considered, the height of which largely depend on that of the labour costs. On the other hand, the variations in gross return should be noted; apart from poor harvests (as for example in Latvia in 1928-29), the prices form the main factor on which depends the height or otherwise of the gross return. Speaking generally it is clear that production is conditioned by marketing facilities and according to the countries these are affected by restrictions on importation or maintenance of exportation at remunerative prices. In the first case, when, as in Switzerland, the frontier is closed for certain products, market congestion is relieved and prices rise; when imports

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are regulated in volume according to the requirements of the importing country, the effect on prices in also good. When importation is duty free, prices will fall if the prices ruling abroad are lower. It is clear that if the accountancy results are to be rightly studied, account must be taken of the governmental measures which appear in the forefront of " Farm Accountancy Statistics," and also of imports and exports, harvests and natural conditions.

All countries are attempting by various measures to safeguard their agriculture from the effects of the crisis; and when the accountancy results of a sufficient number of years are available, it may be possible to see which country will have been the most successful in so doing.

Some study may now be undertaken of these fluctuations in returns and in farming costs, and the causes may be investigated by the use of index-numbers.

In the following table are presented the results of six countries, the results of two of these having been already shown in the preceding tables. The figures are also examined by another method using index numbers, but it will be seen that the results reached are the same. The net return diminishes from 1928-29 to 1930-31, except in Switzerland. On the one hand a decrease in farming costs, except in Austria, is noted, and on the other hand a still more marked decrease in the gross return. Out of the variations in farming costs, it is the labour costs that exercise the greatest influence; they represent 50 to 60 per cent. of the farming costs. In Denmark they do not represent more than 37 to 40 per cent. of the farming costs, because in that country the purchases of stock feeds are the ruling factor. The employment of more or less labour per hectare makes no difference to the influence of the labour costs on the total farming costs. It will be seen from column 8 that the larger the farm the less labour is employed per unit of area.

From 1928-29 to 1930-31 the gross return diminishes. This decrease will be due to the decrease in return on stock farming, to that in the return on crop production, or to these two together. In Switzerland and in Austria, the gross return of the stock farming increased from 1928-29 to 1930-31, and the gross return from crop production diminished. In the other countries, Norway, Denmark, Finland and Estonia, it is seen that the gross return from stock farming and that from crop production alike diminish.

The causes of the decrease, or increase, in gross returns must be sought in the variations of the area reserved for crops, in the price fluctuations, and in the fluctuations in production.

The areas reserved for forage crops have remained the same in all the countries.

The prices of live stock products increased in 1929-30 in Austria, in Denmark and in Estonia; in 1930-31 they increased in Switzerland. On the other hand in Switzerland in 1929-30, in Denmark and in Estonia in 1930-31, in Norway and in Finland from 1928-29 to 1930-31 the live stock prices fell. As regards prices of crop products, from 1928-29 to 1930-31 there was everywhere a decline, with the sole exception of Switzerland.

Production is seen to increase in certain countries, and to diminish in others. Live stock production increases in Switzerland, in Austria and in Nor-

Country	Years	Average area in ha. of cultivated land	Gross return per 1 fr of net return in 1928-29: Animal production	Gross return: Crop production	Gross return: Total	Net return (net return of 1928-29 1)	Farming costs per 1 fr of net return in 1928-29: Total	Farming costs: Labour costs	Labour costs in % of farming costs	Man-days per ha.	Area reserved for artificially sown and natural grassland	Index-numbers of prices of live stock products	Index-numbers of prices of crop products	Index-numbers of animal production	Index-numbers of crop production
			1	2	3	4	5	6	7	8	9	10	11	12	13
SWITZERLAND	1928-29	12.59	4.49	2.25	6.74	*1* —	5 74	3 01	52 —	73 —	10.42	100	100	100	100
	1929-30		4 68	2 30	6.98	*1.37*	5 61	2.89	51 —	70 —	10.52	99	102	104	102
	1930-31		4.82	1.87	6.69	*1.30*	5.39	2 82	52 —	67 —	10.35	101	101	107	83
AUSTRIA	1928-29	17.51	3.72	2.88	6 60	*1* —	5 60	3 40	61 —	70 —	8.77	100	100	100	100
	1929-30		4.17	2 58	6.75	*0.89*	5.86	3.46	59 —	69 —	9.55	106	87	112	90
	1930-31		4.30	2.38	6.68	*0 52*	6.16	3.50	57 —	70 —	9.24	105	66	116	83
NORWAY	1928-29	16.75	5.92	2.98	8.90	*1* —	7 90	3.70	47 —	66 —	10.72	100	100	100	100
	1929-30		5.80	2.40	8.20	*1.02*	7.18	3 39	47 —	64 —	10.29	94	64	98	81
	1930-31		5.60	2.07	7.67	*0 61*	7.06	3.27	46 —	64 —	10.87	89	60	95	70
DENMARK	1928-29	22.83	4.87	0.63	5.50	*1* —	4.50	1.68	37 —	40 —	13.46	100	100	100	100
	1929-30		4.80	0.49	5.29	*0.87*	4.42	1.70	38 —	42 —	13 93	107	90	98	78
	1930-31		3.70	0.42	4.12	*0.07*	4.05	1.59	39 —	39 —	13.40	73	69	76	67
FINLAND	1928-29	22.29	6.15	2 28	8.43	*1* —	7.43	4.23	57 —	42 —	13.83	100	100	100	100
	1929-30		5.69	2.03	7.72	*0.83*	6.89	3 97	58 —	37 —	13.59	92	82	92	89
	1930-31		4.61	1.97	6 58	*0.79*	5.79	3 41	59 —	48 —	13.67	76	68	75	86
ESTONIA	1928-29	36.83	7.21	5 50	12.71	*1* —	11.71	7.26	62 —	27 —	24.74	100	100	100	100
	1929-30		7.36	5.17	12.53	*0 84*	11 69	7.19	62 —	27 —	23.65	114	80	102	94
	1930-31		5.98	4.65	10 63	*0.57*	10.06	6.28	62 —	26 —	23.79	94	55	83	85

way from 1928-29 to 1930-31. In Denmark it diminishes in 1929-30 but in 1930-31 it regains the level of 1928-29. In Estonia it diminishes from 1928-1929 to 1930-31, and in Finland it remains nearly stationary.

Crop production increases from 1928-29 to 1930-31 in Austria, Norway, Finland and Estonia; it diminishes, over the same years, in Switzerland and in Denmark.

One tendency emerges clearly: when prices decline while the cost of farming requisites do not fall, the farmers attempt to compensate the inadequacy of prices by an increase in yields. In Finland the prices of live stock products, which are the most important in this country, fall; but at the same time there is also a fall in the cost of farming requisites and the small farmer of Finland has not endeavoured to increase production. In fact the net return is but little reduced.

The height of prices and of production depend to a considerable extent on governmental measures and on the course of international trade in agricultural products. As regards Switzerland and Denmark, see statements already made.

In 1927 Austria imported 744,000 quintals of dairy products; in 1928 the country ceased to import and in 1930 became an exporter of dairy products. Importation of cattle has been progressively restricted, prices have strengthened and production has increased. The course of events on the market of crop products has been quite other. The market has not been protected and prices and return have fallen.

In Norway it proved necessary to reduce considerably, in 1930, the exports of fluid and condensed milk; prices declined and with prices also the returns. We have here the main cause of the decrease in Norway of the gross return of live stock production.

In Finland there was a steady increase in exports of butter from 1927 to 1930. Milk production which was at a maximum in 1928 has diminished slightly but the collapse of prices which has occurred has brought about the fall in the gross return. In 1930 the Government for the protection of agriculture definitely raised the import duties.

In Estonia, dairy production decreased slightly in 1930 with a noticeable decrease in prices of dairy products. The pig export showed some slackening in 1930.

The third section of this article which will appear in the March number of this Bulletin will form a study of the relative advantage of a branch of farming in countries where different types of farming prevail.

(*To be continued*)

JOSEPH DESLARZES.

STUDIES ON THE INTERNATIONAL MARKET FOR AGRICULTURAL PRODUCTS

I. — Costs and Prices: The Evolution of the Market for Commercial Fertilisers (*continued and concluded*).

V.

After the world war there were thus two markets for nitrogenous fertilisers, the North American with its dependence on cotton, and the European, especially the German, dependent on sugar beet.

The North American market is first considered here, as the statistical data which are needed for reviewing it extend over a period from 1918 to 1932 or a 15 year period.

Corresponding to an exceptionally high price for Middling cotton at New Orleans in 1918 – a price only exceeded in 1800 (1), 1815, 1817, in the period 1861 to 1866, in 1868 and in 1920 – there is also a correspondingly high price for nitrate of soda, although in this case no similar height is registered since 1880. For the years 1918-20 the average price of 100 kg. of Middling at New Orleans was 70.16 dollars, and that of 100 kg. of nitrogen in nitrate of soda 56 dollars. In other words to purchase 100 kg. of nitrogen in the form of nitrate of soda the American cotton-grower had to sell 0.80 quintals of cotton. In the same years the average price of ammonium sulphate in the United States was also exceptionally high. For 100 kg. of nitrogen in ammonium sulphate 63.82 dollars had to be paid, or in other words the American cotton grower had to sell 0.91 quintals of cotton to purchase these 100 kg. of nitrogen. Sulphate of ammonia was thus in 1918 in the United States in a somewhat more unfavourable position, quite apart from the difference between a fertiliser on an ammonia basis and one on a nitrate basis, a question which cannot be discussed here on account of its too great complexity.

Columns 4 and 5, where is found the exchange value between American Middling on the one hand and on the other nitrate of soda or sulphate of ammonia, show that this price relation from 1918-20, with 0.80 quintals of cotton against 100 kg. of nitrogen in nitrate of soda, improves up to 1922-24 and 1923-25, although with a set-back for the average of 1919-20, reaching 0.51 quintals cotton against 100 kg. of nitrogen in nitrate of soda. In 1930-32 on the other hand 100 kg. of nitrogen in nitrate of soda were worth 1.30 quintals cotton.

Over the same period however the exchange value of cotton as compared with ammonium sulphate improved, 100 kg. of nitrogen content in sulphate of ammonia being purchasable in 1918-20 by 0.91 quintal cotton and in 1923-1925 by 0.54 quintal cotton; in 1930-32 the exchange value of cotton fell somewhat but became 0.79 quintal only in comparison. It may now be asked: what was the effect of these variations on the consumption tendencies of nitrate of soda and ammonium sulphate in the United States of America?

(1) Prices before 1918 are given in accordance with the *Deutsches Baumwollhandbuch*, Bremen.

TABLE V. — *The North American Market for Nitrogenous Fertilisers in relation to Cotton Prices.*

Moving 3 years averages	1 American Middling cotton prices, New Orleans Dollars per 100 kg.	2 Chile nitrate of soda N. Y prices Dollars per 100 kg. nitrogen	3 Sulphate of ammonia New York prices Dollars per 100 kg. nitrogen	4 Exchange value Amer. Middling cotton with nitrogen in nitrate of soda quintals cotton for 100 kg.	5 Exchange value Amer. Middling cotton with sulphate of ammonia New York quintals cotton for 100 kg.	6 U. S. A. consumption of nitrate of soda (in fertiliser) million quintals	7 U. S. A. consumption of sulphate of ammonia (in fertiliser) million quintals
1918-20	70.16	56.00	63.82	0.80	0.91	11.81	3.73
1919-21	57.90	45.40	48.31	0.78	0.83	6.88	3.20
1920-22	49.59	38.19	41.76	0.77	0.84	7.34	3.16
1921-23	46.57	31.03	30.91	0.67	0.66	5.95	3.16
1922-24	56.70	28.84	32.16	0.51	0.57	8.16	3.75
1923-25	58.58	36.03	31.45	0.51	0.54	10.13	4.33
1924-26	50.48	30.41	29.69	0.60	0.59	10.31	4.45
1925-27	42.62	32.60	28.65	0.76	0.67	9.40	4.78
1926-28	40.00	32.69	27.14	0.82	0.68	9.13	4.87
1927-29	40.59	32.65	25.53	0.80	0.63	9.08	5.41
1928-30	37.59	30.60	23.92	0.81	0.64	8.35	5.71
1929-31	29.44	29.46	20.28	1.00	0.69	6.62	5.60
1930-32	20.44	20.67	16.16	1.30	0.79	3.74	5.42

In the first place, a decline in the consumption of nitrate of soda may be noted, from an average of 11,810,000 quintals in 1918-20 to one of 5,950,000 in 1921-23, which, as column 6 of Table V shows, appears to be solely due to the price fall in cotton prices. These in the same period fell from 70.16 dollars per quintal to 46.57 dollars. The consumption of nitrate of soda is seen further to follow the movements of the cotton prices, that is to say, to increase and then to fall sharply in accordance with the price fall in cotton. The price of cotton amounted to only little more than 20.44 dollars per quintal for 1930-32 as compared with 50.48 dollars per quintal in 1924-26, and similarly the consumption of nitrate of soda amounted in 1930-32 to an average of only 3,740,000 quintals as compared with 10,310,000 quintals for 1924-26.

On the other hand the consumption of ammonium sulphate in the same period rose from 4,450,000 quintals as the average for 1924-26 to 5,420,000 quintals for 1930-32. This fact is to be explained by the variations in the exchange value of cotton and nitrate of soda on the one hand and cotton and ammonium sulphate on the other. The divergence in the course of these two fertilisers, which has put nitrate of soda at a disadvantage as compared with ammonium sulphate, has naturally led to the marked fall in the consumption of nitrate of soda and the rise in that of ammonium sulphate, although the latter cannot in any way compensate for the falling off noted above in the nitrate of soda consumption. In 1932 only 490,000 quintals of nitrate of soda were consumed in the United States, in other words the consumption has become practically of no importance.

This change in the market situation seems to due merely to the changes in the price relations, for the area under cotton in the United States does not in these years essentially vary in accordance with the variations in the consumption of nitrate of soda, as appears from a comparison of the items in column 2 of Table II with those of column 6 of Table V.

The unfavourable development of the price relations between cotton and nitrate of soda in connection with the development of the price relations between cotton and sulphate of ammonia results thus in the consumption of nitrate of soda on the nitrates market of the United States becoming of no practical importance, while the consumption of sulphate of ammonia increases but to a much less extent, so that the total consumption in nitrogenous fertilisers of the United States has very considerably declined. The total in nitrate of soda and sulphate of ammonia taken together amounts in 1930-32 to 9,160,000 quintals as compared with 15,540,000 in 1918-20.

In 1932 the consumption in nitrate of soda in the United States amounted only to 490,000 quintals, and was thus practically of no importance, while other synthetic nitrogenous fertilisers play no special part. Hence it may be assumed that in 1932 in the United States, so far as there was utilisation of nitrogenous fertilisers, it was in the form of sulphate of ammonia (1).

(1) The total output of nitrate of soda in 1932 was not more than 6,910,000 quintals, while in 1929 the consumption in the United States was still 9 130,000 quintals. In France, in 1932, the consumption was 3,100,000 quintals, an insignificant figure compared with the earlier world consumption.

The decrease in the consumption of nitrate of soda did not result in any larger utilisation of sulphate of ammonia, for the reason in the first place that in the United States this latter is mainly a by-product of the gas and coke factories. These cannot increase their output at will, especially when the greater proportion of the coal is " coked " in coke ovens equipped with a by-product recovery plant. It was for this reason that during the war in Germany it became necessary to obtain synthetically the required additional production of sulphate of ammonia, or nitrogen compounds, and in this way the great transformation of the world market came about.

The same results are evident if the aggregate sales of artificial fertilisers are considered in the nine principal cotton growing States of North America: North Carolina, South Carolina, Georgia, Alabama, Mississippi, Tennessee, Louisiana, Arkansas, Texas. The sales of commercial fertilisers in these States in the years 1927-32 were as follows (taken from the Cotton Year Book of the New York Cotton Exchange):

	in 1000 short tons
1927	3,643
1928	4,633
1929	4,582
1930	4,612
1931	3,254
1932	1,963

It will be seen that the variations in sales of chemical fertilisers in these cotton growing States of North America are very similar to those shown for nitrate of soda and sulphate of ammonia alone.

How far the costs of fertilisers influence the production costs of cotton is shown by the following figures taken from a work by W. H. Johnson entitled " Cotton and its Production ", which is based on 842 separate reports made for the year 1918:

State and county	Production costs per acre (dollars)	Manuring expenditure per acre (dollars)	In % of costs of production
Georgia:			
Lauras County	5.40	3.85	71
Greane	6.46	4.17	65
Sumter	7.63	4.92	64
Alabama:			
Tallapoona	5.17	3.07	59
Marshall	10.30	6.43	62
Dale	5.88	3.54	60
South Carolina:			
Anderson	8.21	5.93	72
Barnwell	13.41	11.24	84
Texas:			
Ellis	1.20	—	—
Rusk	3.52	2.11	60

The high proportion of the production costs of cotton represented by the expenditure on fertilisers — highest in the Eastern States — is further proof of the dependence of the prices, or consumption, of fertilisers on cotton prices, or on the area under cotton. It is of interest to note that, according to W. H. Johnson, cotton seed is used in some States as a direct fertiliser. Such quantities of cotton seed are not very large in themselves and cannot be expressed in figures owing to the absence of specific statistics, but are included in the above statistics as to the consumption of fertilisers for the cotton of the nine principal cotton growing states of the United States.

The statistical data in regard to the German market in nitrogenous fertilisers are comparable only from 1924 onwards, after the inflation period. In the ten years up to 1932 the conditions have been similar to those in the United States. But some important differences are to be noted due to the fact that in 1924 the market was already governed by the volume of the sulphate of ammonia and the synthetic nitrates whereas nitrate of soda took a quite subordinate place. In 1924 the consumption of nitrogenous substances for agriculture in Germany was as follows:

	Quintals	%
Sulphate of ammonia	8,800,000	64.75
Nitrate of soda	50,000	0.37
Calcium cyanamide	2,120,000	15.60
Other forms of synthetic nitrogen compounds	2,620,000	19 28
	13,590,000	100.00

There is a decided contrast between the position in the United States where by 1932 nitrate of soda had almost disappeared from the market, and was not replaced by other nitrogenous fertilisers, and in particular not by the synthetic nitrates, and that of the consumption in German agriculture which for 1930-32 was 17,710,000 quintals of nitrogenous substances or 2,970,000 quintals higher than that for 1924-26, *viz.*, 14,740,000 quintals. This expansion is mainly owing to the introduction of the synthetic nitrogenous fertilisers, the consumption of which showed an increase of 3,450,000 quintals for 1924-26 to 8,160,000 quintals for 1930-32. The consumption of lime nitrogen also increased while that of sulphate of ammonia had declined from 8,370,000 quintals for 1924-26 to 4,710,000 quintals for 1930-32.

The consumption of nitrate of soda does actually show an increase proportionately large, from 150,000 quintals for 1924-26 to 750,000 quintals in 1930-32, but in comparison with the total consumption in nitrogenous fertilisers it may be said to be unimportant. From 1924 onwards, the German consumption of nitrogen reached its highest point in the average for 1928-30, *viz.*, 19,910,000 quintals; up to 1930-32 there was no great falling off, and from 1931, with 15,970,000 quintals, to 1932 with 17,450,000 quintals there was again a slight recovery. The consumption in synthetic nitrate fertilisers shows from 1924-26 to 1930-32 a

TABLE VI. — *The German Market for Nitrogenous Fertilisers in relation to Sugar Prices.*

Moving 3 years averages	1 Raw sugar prices Magdeburg RM per 100 kg	2 Sulphate of ammonia prices for 100 kg nitrogen in RM	3 Ammonium salpetre (Leuna saltpetre) prices for 100 kg nitrogen in RM	4 Chile nitrate of soda prices for 100 kg nitrogen in RM	5 Exchange value of raw sugar Magdeburg with sulphate of ammonia quintals sugar for 100 kg nitrogen
1924-26	39.41	105.52	105.52	148.99	2.68
1925-27	39.14	99.83	99.83	150.56	2.55
1926-28	40.19	95.01	95.01	142.53	2.36
1927-29	41.62	91.38	91.88	134.79	2.19
1928-30	40.55	87.91	89,95	—	2.17
1929-31	40.82	84.05	87.75	—	2.06
1930-32	41.29	78.45	84.02	-	1.90
1931-33	41.34	74.01	80.28	114.17	1.79

Moving 3 years averages	6 Exchange value of raw sugar Madgeburg with ammonium saltpetre (Leuna saltpetre) quintals of sugar for 100 kg nitrogen	7 Exchange value of raw sugar Madgeburg with Chile nitrate of soda quintals of sugar for 100 kg nitrogen	8 Consumption of sulphate of ammonia million quintals	9 Consumption of Leuna saltpetre (1) million quintals	10 Consumption of Chile nitrate of soda million quintals
1924-26	2.68	3.78	8.37	3.45	0.15
1925-27	2.55	3.85	8.28	4.59	0.21
1926-28	2.36	3.55	7.98	5.91	0.42
1927-29	2.21	3.24	7.52	7.17	0.68
1928-30	2.22	—	6.46	8.26	0.96
1929-31	2.15	—	5.27	8.64	0.92
1930-32	2.03		4.71	8.49	0.75
1931-33	1.94	2.76	—		

(1) Including other nitrates and "nitrophoska"

large increase of 3,450,000 quintals to 8,490,000 quintals, with however a decline from 1930 to 1932 from 8,130,000 quintals to 8,030,000 quintals.

The marked increase in consumption of the nitrogenous fertilisers as a whole from 1924-26 to 1930-32 was largely due to the favourable movement of the exchange value of beet sugar, that all important product for the German nitrogenous fertiliser market, as compared with these fertilisers. The price relation between these and beet sugar greatly improved, and in fact nearly in equal measure for each of the important nitrogenous fertilisers. To purchase 100 kg. of nitrogen content of sulphate, of ammonia, etc., the following quantities of beet

sugar (melis sugar on the Magdeburg market) were required in the years under review:

	Sulphate of ammonia	Leuna saltpetre	Nitrate of soda
in 1924-26	2.69	2.69	3.48
» 1930-32	1.90	2.03	3.23 (1927-29)

The decrease in consumption from 1930 to 1932 is not however based on any successive unfavourable price relation between beet sugar and nitrogen, nor is the recovery from 1931 to 1932 so based, since for the purchase of 100 kg. of nitrogen content the following quantities in quintals of beet sugar were required:

	Sulphate of ammonia	Leuna saltpetre	Nitrate of soda
in 1930.	2.05	2.16	3.08 (in 1929)
» 1931.	1.90	2.04	2.90
» 1932.	1.76	1.90	2.71

The exchange value between beet sugar and nitrogen improved in favour of sugar in Germany from 1930, and equally in respect of all the nitrogenous fertilisers. On the other hand a decrease in the consumption of nitrogenous manures took place, due to a reduction in the area under sugar beet. The large increase in the consumption of nitrogenous manures from 1924-26 to 1930-1932 followed the parallel increase in the area under sugar beet, which from 400,100 hectares in 1924-26 increased to 464,270 hectares in 1928-30; while the decrease from 1930 to 1932 of the area under sugar beet was accompanied by a decrease in nitrogen consumption. This area diminished from 483,000 hectares in 1930 to 270,800 hectares in 1932, a 43,93 per cent. decrease, while the decrease in the volume of nitrogenous manures sold on the German market is from 19,700,000 quintals in 1930 to 17,450,000 in 1932, or just over a ten per cent. decrease. The reason of this may be that, in spite of the indisputable interdependence that exists between the area under sugar beet and the consumption of nitrogenous manures, in the case of a very marked diminution in the area under sugar beet, as occurred from 1930 to 1932, the effect was less perceptible owing to the unchanged position of the other crops which require such fertilisers. On the other hand, it will be seen that the areas under wheat in Germany in the period from 1924 to 1932 continued to increase, but it may also be noted that this ascending course is sometimes opposed to the consumption of nitrogenous manures, as in the years 1928, 1929 and 1930, when the area under wheat in Germany in 1929 is lower than in 1928, or 1,600,000 ha. as compared with 1,728,000 ha., while in 1930 it was 1,781,000 ha. In those same years the consumption of nitrogenous fertiliser follows an exactly contrary course; the amount being 19,850,000 in 1928, 20,170,000 in 1929 and 19,700,000 quintals in 1930. Also from 1930 to 1932 the wheat areas showed continuous increase, *viz.*, from 1,781,000 ha. in 1930 to 2,167,000 ha. in 1931 and 2,280,000 ha. in 1932, while the consumption of nitrogenous manures in the same years declined from

19,700,000 quintals in 1930 to 15,970,000 in 1931 and 17,450,000 in 1932. This cannot be explained from the price relation of wheat to nitrogen, which, while improving considerably from 1924 to 1932, does not seem to have exercised any great influence during the decisive years on the consumption of nitrogenous manures. Thus the exchange value between wheat and nitrogen becomes less favourable from 1928 to 1929, while, as already noted, the consumption of nitrogenous manures increased during that period to a marked extent.

TABLE VII. — *Value of 100 kg. of Nitrogen Content in Germany in Quintals of Wheat.*

Year	Nitrate of soda	Sulphate of ammonia	Leuna saltpetre	Cyanamide of calcium
1924	7 95	6 00	6 00	5 60
1925	6.23	4.35	4 35	3 94
1926	5.53	3 73	3 73	2 40
1927	5 68	3 51	3 51	3 23
1928	5 31	3.77	3 77	3 50
1929	5 26	3 78	3 84	3 56
1930	—	3 18	3 36	3 07
1931	4 70	3 07	3 31	3 04
1932	4 85	3 15	3 41	3 14
1933	5 83	3.74	4 09	3 82

Although in our opinion the two most important world markets governing prices of nitrogenous manures since the war are those of the United States and Germany, some attempt will be made here briefly to discuss the course of events in Great Britain.

As shown in Table VIII, the course of the British market very closely follows that of the North American market, although there is this fundamental difference, *viz.*, that the British nitrogen market is influenced by the prices of beet sugar and not by those of cotton. The price relations for refined sugar and for nitrate of soda on the one hand and sulphate of ammonia on the other hand are calculated. Since however the German sugar prices are the prices ruling on the Magdeburg market for raw sugar, they are not strictly comparable with the prices of sugar in Great Britain, but their general course can be compared.

It will be seen that the exchange value between sugar and the nitrogen content of nitrate of soda (column 4) in Great Britain, became from 1924-26 onwards very unfavourable; on the other hand that between sugar and sulphate of ammonia (column 5) was more favourable, although with fluctuations. There is a specially marked divergence in the curves relating to the exchange value of the two fertilisers from 1929-31 onwards, while the exchange value of sugar with nitrate of soda remains almost unaltered. The result was a sharp decline in the consumption of the nitrate in Great Britain, but no increase in that of sulphate of ammonia. The area under sugar beet diminished from 141,200 ha. in 1930 to 94,800 ha.

TABLE VIII. — *The British Market for Nitrogenous Fertilisers in relation to Sugar Prices.*

Moving 3 years averages	1 Prices of refined sugar in London sh. per quintal	2 Prices of nitrate of soda in Liverpool sh. per 100 kg. nitrogen	3 Prices of sulphate of ammonia in London (– neutral) sh. per 100 kg. nitrogen	4 Exchange value sugar with nitrate of soda Liverpool	5 Exchange value sugar with sulphate of ammonia London	6 Consumption of nitrate of soda in fertiliser million quintals	7 Consumption of sulphate of ammonia million quintals
				quintals sugar per 100 kg. nitrogen			
1921-23	110.51	196.65	157.36	1.78	1.42	0.53	1.32
1922-24	101.98	174.86	144.42	1.71	1.42	0.60	1.34
1923-25	89.68	168.49	133.96	1.88	1.49	0.75	1.25
1924-26	70.70	168.06	127.10	2.38	1.80	0.64	1.35
1925-27	60.47	164.36	118.31	2.72	1.96	0.65	1.38
1926-28	58.17	154.23	110.41	2.65	1.90	0.63	1.43
1927-29	53.80	141.89	101.92	2		0.76	
1928-30	47.10	129.48	96.66	2		0.65	
1929-31	42.53	124.93	89.27	2	1	0.66	
1930-32	40.02	119.03	76.49	2	9		

in 1931 to expand again to 103,500 in 1932. As happened in the United States, so in Great Britain the nitrate of soda almost disappeared from use and was not replaced in the same proportion by other nitrogenous fertilisers; the consumption of sulphate of ammonia from 1,240,000 quintals in 1931 became 1,610,000 in 1932, an increase of 370,000 quintals, while that of nitrate of soda fell from 770,000 in 1931 to 80,000 only in 1932, or a decline of 690,000 quintals. So too, as in the United States, the synthetic nitrates take no important place; in fact these products have never had special importance on the British market.

To summarise the results of this section: in the first place after the war nitrate of soda completely lost the great importance which it formerly had on the world market; secondly, the extraordinary decline in the consumption in the United States has resulted in the disappearance of this great market which used formerly to fix the prices of this fertiliser.

On the other hand, Germany, which up to the declaration of war used equally with the United States to exercise an influence on the world market in nitrogenous substances, had gained by 1932 a much greater influence as the result of the almost complete decline in consumption in the United States and the marked increase of German consumption. Similar movements have been noted on the British market, but no decisive influence can be attributed to these. Finally it cannot be shown that wheat has exercised any influence on this market.

Before the war cotton and beet sugar influenced the nitrate of soda market and thereby the world market in nitrogenous substances and this situation prevailed up to 1930. By 1932, however, in consequence of the nearly complete disappearance of nitrate of soda from the nitrogen consumption of the United States, the influence of cotton on the world market in nitrogenous substances had so far declined that by that date this market, more particularly in the synthetic nitrates, was influenced by beet sugar exclusively. The synthetic compounds of nitrogen are replacing the nitrate of soda, which is a natural product; nitrogen obtained as a by-product from the factories is also losing its importance. Speaking generally, the cultivation of sugar beet is now the most decisive influencing factor, together with, on the other side, the production of synthetic nitrates, especially in present day Germany.

VI.

In this section a study will be made of the conditions which in the last few years, from 1928-29 to 1933-34, have affected the principal commercial fertilisers of the three groups: nitrogenous, phosphoric and potassic. As a beginning this enquiry has to be limited to nine countries: Germany, Denmark, France, Great Britain, Italy, Netherlands, Poland, Sweden and Czechoslovakia. These nine countries may be regarded as representative consumers of fertilisers. If the aggregate consumption in commercial fertilisers in these countries is compared with the world production, it will be seen that in 1928 their consumption was 53 per cent. and in 1932 it was 58 per cent. of the world production of commercial fertilisers, not including raw phosphates. The following is the consumption

of these nine countries for the years 1928 to 1932 in commercial fertilisers taken together, exclusive of raw phosphates.

Countries	1928	1929	1930	1931	1932
	in million quintals				
Germany	61.50	61.25	60.98	50.79	49.42
Denmark	5.78	8.01	8.13	5 11	4.68
France	38 56	42.15	34.26	32.20	29.99
Great Britain and Northern Ireland	11.37	13 01	10.30	9.96	8 50
Italy	17.14	20.02	16 87	12 27	14.14
Netherlands	14 78	15.26	13 09	10.37	7 63
Poland	12.16	12.97	7.81	4.86	4.03
Sweden	4.03	4.04	4.27	3.50	2.97
Czechoslovakia	6.14	6.43	4.39	4.10	3 55
Total	171.46	183.14	160 10	133.16	124.91

The results of the comparison from the international standpoint of these important consumers of commercial fertilisers will now be examined.

The comparison is based on the exchange value of the products as compared with the means of production. As products are here chosen the arable crops, wheat and oats, for which statistical comparison is possible Unfortunately, owing to the absence of comparable data as to prices, beet sugar, the influence of which has been noted in detail on the market for commercial, and in particular for nitrogenous fertilisers, cannot at present be included in a far-reaching international comparison.

Among the arable crop products wheat and oats have been selected, primarily because partial treatment of this wide sphere alone is possible here and the enquiry must needs be limited to the most important and most representative products, in the second place because, next to sugar beet, wheat and oats are the crops most avid of the nutritive substances available in the soil. This appears clearly from the following figures, which express in kilogrammes per hectare the quantities of nutrient substances removed from the soil by an average crop (after Krische: Agrikulturchemie).

	Nitrogen	Potassium	Phosphoric acid
		kilogrammes per hectare	
Wheat	85	40	30
Sugarbeet	75	50	35
Oats	65	70	20
Rye	65	50	25
Barley	60	35	20

Wheat is of especial importance, partly as a main breadstuff crop, but also because, apart from its actual requirements in nutrients shown above, it only gives good yields when an excess of nutritive substances available in the soil.

Oats respond to nitrogen but more to potassium. The requirements of rye and especially of barley are smaller. Maize occupies an intermediate place between sugar beet and oats in this respect, but the actual figures are not shown for reasons of space.

The limits of this article unfortunately do not make it possible so to reproduce in detail the changes in the exchange value of the two cereals as compared with the fertilisers as to give the development in the separate years. For this reason only the two years 1928-29 and 1933-34 are here compared. This selection, however, from the general trend of such events during the period provides evidence of very interesting changes in the situation of the different cereal producing countries and of their position with respect to each other.

The following Table IX shows the situation for the wheat producers of the different countries in 1928-29 and 1933-34, *i.e.*, it indicates the number of quintals of wheat the grower in the different countries had to offer for the purchase of 100 kg. of the specific nutritive element of any one fertiliser in the two years compared. The items are arranged in the series according to the international position of the production lands, and in each case from the country where conditions are most favourable to that where they are least so; accordingly an impression of the general situation may be easily gained.

TABLE IX. — *The Exchange Value of Wheat with the Fertilisers in 1928-29 and 1933-34* (1).

The wheat grower in the countries in order to purchase 100 kg. of phosphoric acid (P_2O_5) contained in basic slag had to sell quantities of wheat as follows (in quintals): —

1928-29		*1933-34*	
1. – France	0.86	1. – Netherlands	0.91
2. - Italy	1.11	2. – France	1.01
3. - Czechoslovakia	1.34	3. – Germany	1.37
4. – Germany	1.38	4. - Czechoslovakia	1.58
5. - Netherlands	1.43	5. – Great Britain	3.12
6. - Great Britain	1.61	6. – Italy (no quotation for basic slag).	

Number of quintals of Wheat required to purchase 100 kg. of phosphoric acid contained in Superphosphate.

1928-29		*1933-34*	
1. - Italy	0,99	1. – Netherlands	0.86
2. – France	1.34	2. – France	1.57
3. – Germany	1.57	3. – Italy	1.67
4. – Netherlands	1.70	4. – Germany	1.70
5. - Poland	1.82	5. – Czechoslovakia	1.96
6. – Czechoslovakia	1.82	6. – Sweden	2.22
7. -- Great Britain	1.97	7. – Poland	2.81
8. – Denmark	1.99	8. – Denmark	2.92
9. - Sweden	2.07	9. – Great Britain	3.56

(1) For nitrate of soda, 1932-33.

Exchange Value of Wheat (in quintals) for Potash (K_2O).

1928-29		1933-34	
1. – France	0.59	1. – Netherlands	0.69
2. – Germany	0.70	2. – France	0.73
3. – Czechoslovakia	0.88	3. – Germany	0.90
4. – Poland	0.94	4. – Czechoslovakia	0.94
5. – Italy	1.27	5. – Italy	1.58
6. – Netherlands	1.41	6. – Poland	2.00
7. – Great Britain	2.14	7. – Sweden	2.16
8. – Denmark	2.17	8. – Denmark	2.86
9. – Sweden	2.25	9. – Great Britain	4.44

Number of quintals of Wheat for 100 kg. Nitrogen in Sulphate of Ammonia.

1928-29		1933-34	
1. – Poland	2.58	1. – Netherlands	1.75
2. – Italy	3.54	2. – France	3.55
3. – France	3.86	3. – Germany	3.64
4. – Czechoslovakia	4.17	4. – Czechoslovakia	4.07
5. – Germany	4.22	5. – Italy	4.45
6. – Great Britain	5.07	6. – Poland	5.29
7. – Netherlands	5.12	7. – Denmark	6.24
8. – Denmark	5.86	8. – Great Britain	6.92

Number of quintals of Wheat required for 100 kg. Nitrogen from nitrate of soda (in Germany Leuna saltpetre).

1928-29		1932-33	
1. – Germany	4.22	1. – Netherlands	3.41
2. – France	4.85	2. – Germany	3.91
3. – Czechoslovakia	6.02	3. – France	4.97
4. – Great Britain	6.74	4. – Czechoslovakia	6.15
5. – Netherlands	7.14	5. – Sweden	7.00
6. – Sweden	7.71	6. – Great Britain	9.97

Summarising it may be said that the most striking instance in respect to the exchange value of wheat with the commercial fertilisers occurs in the Netherlands where an extraordinarily favourable development is witnessed. The reason must be found in the intervention of the Netherlands Government on the wheat market; in 1933-34 the grower in the Netherlands received for his wheat a price of 13.13 fl. per quintal as compared with 10.50 fl. per quintal in 1928-29.

Fertiliser prices however even in the Netherlands have followed the general price decline, and this coincidence of high wheat prices with reduced fertiliser prices has brought about the favourable exchange value of with fertilisers in 1933-34.

In the other countries the conditions have only slightly improved, or are barely maintained, or have somewhat worsened. The most striking instances are the declines for fertilisers in general in Great Britain and Denmark, and for sulphate of ammonia in Poland.

To establish an international comparable monetary unit basis, we have transformed into gold francs (Swiss francs) the differences expressed in weight of the exchange value resulting from the comparison of each of the countries taken into consideration with Germany, using the corresponding wheat prices and the respective rates of exchange.

In Table X these gold franc values are shown. But while for the gold block countries the height of the wheat prices on the internal market alone has importance for the calculation of these values in gold francs, the values in gold francs in the countries where the fate of the currency is linked with that of the English pound, and also in Czechoslovakia where in the winter of 1933-34 the currency was similarly depreciated, follow fluctuations corresponding to rates of exchange. Thus the wheat grower in Great Britain, in 1930-31, had to sell 3.84 more quintals of wheat than the wheat grower in Germany to purchase 100 kg. of nitrogen in sulphate of ammonia, which, given the wheat prices of the time and the gold parity of the pound, represented 61.88 gold francs.

TABLE X. — *The Exchange Value of Wheat with Commercial Fertilisers in the Different Countries as compared with Germany expressed in gold francs for 1928-29 and 1933-34.* (1)

	1928-29	1933-34
Basic Slag.		
Germany	± 0.00	± 0.00
Czechoslovakia	— 1.18	+ 4.46
France	— 16.47	— 9.06
Great Britain	+ 5.93	+ 13.72
Italy	— 9.63	—
Netherlands	+ 1.09	— 12.58
Superphosphate.		
Germany	± 0.00	± 0.00
Czechoslovakia	+ 7.35	+ 5.52
Denmark	+ 9.74	+ 10.60
France	— 7.28	— 3.27
Great Britain	+ 10.31	+ 14.58
Italy	— 20.69	— 0.68
Netherlands	+ 2.85	— 22.97
Poland	+ 7.06	+ 14.25
Sweden	+ 13.37	+ 7.38
Potash.		
Germany	± 0.00	± 0.00
Czechoslovakia	+ 5.29	+ 0.85
Denmark	+ 34.10	+ 17.03
France	— 3.48	— 4.28
Great Britain	+ 37.12	+ 27.76
Italy	+ 20.34	+ 15.49
Netherlands	+ 15.54	— 5.74
Poland	+ 6.77	+ 14.12
Sweden	+ 41.44	+ 17.89

(1) For nitrate of soda 1932-33.

Sulphate of Ammonia.

	1928-29	1933-34
Germany . . .	± 0.00	± 0.00
Czechoslovakia .	— 1.47	+ 9.13
Denmark . . .	+ 38.04	+ 22.59
France	— 11.40	— 2.27
Great Britain. .	+ 21.91	+ 25.72
Italy	— 24.26	+ 18.45
Netherlands . .	+ 19.70	— 51.69
Poland	— 46.29	+ 21.18

Nitrate of soda.

	1928-29	1932-33
Germany . . .	± 0.00	± 0.00
Czechoslovakia .	+ 52.91	+ 52.99
France	+ 19.96	+ 24.21
Great Britain. .	+ 64.97	+ 59.19
Netherlands . .	+ 63.93	— 13.14
Sweden	+ 93.31	+ 49.85

In 1933-34, however, the quantity of wheat which must be sold in order to purchase 100 kg. of nitrogen in sulphate of ammonia had slightly improved in England, as compared with Germany, and was as much as 3.28 quintals of wheat, but the price decline of wheat and the devaluation of the British pound made the difference in gold francs fall to 25.72.

In nearly all the countries with depreciated currencies it is possible to establish these changes in the valuation of the price relations expressed in gold francs; the opposite tendencies are very clearly apparent in the values for the Netherlands.

These relations cannot be further followed in detail.

There may here given for 1933-34, and for 1932-33 in the case of nitrate of soda and Leuna saltpetre, the differences in the exchange value expressed in gold francs and due to the changes which have taken place in the prices of wheat and in the currency, as affecting the place order of the countries. The following is the situation resulting: (1) Basic Slag, no change; (2) for superphosphate Denmark takes the seventh place and Poland the eighth; (3) for potash, Italy yields the fifth place to Poland which moves up from the sixth to the fifth, Denmark takes the seventh place, Sweden the eighth; (4) for sulphate of ammonia, no changes; (5) for nitrate of soda and Leuna saltpetre, Sweden takes the fourth place and Czechoslovakia the fifth.

The influences just described have not accordingly given rise to any very considerable changes.

THE EXCHANGE VALUE OF OATS AGAINST THE COMMERCIAL FERTILISERS. For reasons of space this section will be confined to the comparison of the years 1928-29 and 1933-34 using the exchange value expressed in weight of oats as shown in Table XVI and to the comparison of the exchange value differences as compared with Germany in gold francs, as shown on Table XI.

Speaking quite generally the exchange value of oats with the commercial fertilisers has declined as regards oats from 1928-29 to 1933-34. Oat prices have declined more than the prices of commercial fertilisers with the result as stated. In comparison with countries the exchange value of oats with commercial fertilisers has improved for the German oat grower. For basic slag, superphosphate, and potash, Germany takes the first place in 1933-34 (for Chile nitrate of soda, or Leuna saltpetre, 1932-33); whereas in 1928-29 Germany occupied the second place for basic slag and superphosphate and stood first only for nitrate

of soda or Leuna saltpetre. In respect of sulphate of ammonia Germany occupies the second place only in 1933-34 after the Netherlands.

The Netherlands were also able greatly to improve their position as regards oats as compared with the other countries. For basic slag the advance was from the fifth place in 1928-29 to the second in 1933-34, for superphosphate from the fourth to the second, for sulphate of ammonia from the seventh to the first, and for nitrate of soda from the fifth place in 1928-29 to the fourth in 1932-33.

As regards the exchange value of oats with commercial fertilisers, Great Britain was able to improve its position partially, rising for basic slag from the sixth to the fourth place, for superphosphate from the sixth to the fifth, and for sulphate of ammonia from the sixth to the third. In respect of nitrate of soda (or equivalent Leuna saltpetre) Great Britain maintained in both years the third place, while for potash there was a fall from the eighth to the ninth place.

The situation has become especially worse for the French out growers in these years in consequence of the very marked decline in the oat prices; in 1928-29 the price of oats was 130.79 frs. per quintal, while in 1933-34 it was 48.55 francs only, on the other hand the fall in prices of commercial fertilisers was less striking. In consequence the change in the position of France has been as follows: for basic slag from the first to the third place, for superphosphate from the second to the eighth place, for potash from the first to the fourth place, for sulphate of ammonia from the fourth to the eighth place. For nitrate of soda (or Leuna saltpetre) for both the years 1928-29 to 1932-33 France maintained the second place, as the drop in oat prices only began in 1933-34.

All other changes are shown in Table XI.

TABLE XI. — *Number of quintals of Oats required to purchase* 100 *kg of nutrients in the separate fertilisers in the different countries in 1928-29 and 1933-34 (or for nitrate of soda or Leuna saltpetre* 1932-33).

Basic slag.

1928-29		*1933-34*	
1 – France	1,02	1. – Germany	1.74
2. – Italy	1.39	2. – Netherlands	2.41
3. – Germany	1.46	3. – France	2.57
4. – Czechoslovakia	1.48	4. – Great Britain	2.67
5. – Netherlands	1.54	5. – Czechoslovakia	3.14
6. – Great Britain	1.58	6. – Italy (no quotation for basic slag).	

Superphosphate.

1928-29		1933-34	
1. – Italy	1.24	1. – Germany	2.16
2. – France	1.59	2. – Netherlands	2.25
3. – Germany	1.67	3. – Italy	2.77
4. – Netherlands	1.83	4. – Denmark	2.88
5. – Denmark	1.92	5. – Great Britain	3.04
6. – Great Britain	1.94	6. – Sweden	3.40
7. – Czechoslovakia	2.02	7. – Czechoslovakia	3.90
8. – Poland	2.36	8. – France	4.01
9. – Sweden	2.62	9. Poland	4.53

Potash.

1928-29		1933-34	
1. – France	0.70	1. – Germany	1.14
2. Germany	0.74	2. – Netherlands	1.80
3. Czechoslovakia	0.97	3. – Czechoslovakia	1.86
4. – Poland	1.22	4. – France	1.87
5. Netherlands	1.52	5. Italy	2.63
6. – Italy	1.62	6. Denmark	2.82
7. Denmark	2.10	7. – Poland	3.23
8. Great Britain	2.11	8. Sweden	3.30
9. – Sweden	2.84	9. – Great Britain	3.80

Sulphate of ammonia.

1928-29		1933-34	
1. – Poland	3.34	1. – Netherlands	4.61
2. – Italy	4.44	2. – Germany	4.62
3. – Germany	4.49	3. – Great Britain	5.92
4. – France	4.60	4. – Denmark	6.15
5. – Czechoslovakia	4.63	5. – Italy	7.41
6. – Great Britain	4.99	6. – Czechoslovakia	8.10
7. – Netherlands	5.52	7. – Poland	8.53
8. – Denmark	5.60	8. – France	9.08

Nitrate of soda.

1928-29		*1932-33*	
1. – Germany	4.49	1. – Germany	5.91
2. – France	5.78	2. – France	6.92
3. – Great Britain	6.63	3. – Great Britain	9.03
4. – Czechoslovakia	6.69	4. – Netherlands	10.03
5. – Netherlands	7.69	5. – Sweden	11.01
6. – Sweden	8.57	6. – Czechoslovakia	12.02

To transform the exchange values expressed in weights of oats as compared with commercial fertilisers into gold (Swiss francs) the method adopted in the case of wheat is followed also here and the results will be found in Table XVII. Differences are also shown in comparison with Germany.

In commenting on this table special note may be taken of the change in the situation of the French oat growers, since it shows in a striking manner the position of a planned economy which covers a part only and not the whole of the products. Thus as compared with the situation of the German growers, that of the French oat growers has become much more unfavourable from 1928-29 to 1933-34. The difference in the exchange value between the two years is as follows:

Oats with basic slag	19.87	gold	francs
» » superphosphate	20.36	»	»
» » potash	8.25	»	»
» » sulphate of ammonia	18.73	»	»

On the other hand for nitrate of soda (or Leuna saltpetre) the exchange value of French oats improves in comparison with the German oats from 1928-29 to 1932-33 by 17.71 gold francs.

Transforming the values expressed in weight into values in gold francs, the following changes result for the year 1933-34 in the relative position of the different countries: (1) for basic slag, no change; (2) for superphosphate, Denmark passes to the third place, Italy to the fifth, France to the seventh, Czechoslovakia to the eighth; (3) for potash, France passes from the fourth to the third place in front of Czechoslovakia, Denmark from the sixth to the fifth, Italy from the fifth to the eighth, Poland from the seventh to the sixth, and Sweden from the eighth to the seventh, while Great Britain keeps the ninth place; (4) for sulphate of ammonia, France passes from the eighth to the fifth place, Italy from the fifth to the eighth, Czechoslovakia from the sixth to the seventh, Poland from the seventh to the sixth place. As regards nitrate of soda, or Leuna saltpetre, the order of the different countries on the scale remains the same for the years 1928-29 and 1932-33.

Table XII shows the gold franc values in order from the country where the exchange value of oats is most favourable to the country where the value is most unfavourable.

TABLE XII. — *To purchase 100 kg. of nutrients in the separate fertilisers, the oat grower of the different countries must pay in 1928-29 and 1933-34 (for nitrate of soda or Leuna saltpetre, 1932-33).... gold francs more or less than the grower in Germany.*

Basic Slag.

1928-29		1933-34	
1. – France	— 11.69	1. – Germany	± 0.00
2. – Italy	— 1.99	2. – Netherlands	+ 6.96
3. – Germany	± 0.00	3. – France	+ 8.18
4. – Czechoslovakia	+ 0.53	4. – Great Britain	+ 8.53
5. – Netherlands	+ 1.63	5. – Czechoslovakia	+ 14.93
6. – Great Britain	+ 3 15	6. – Italy (no quotation for basic slag)	

Superphosphate

1928-29		1933-34	
1. – Italy	— 12.24	1. – Germany	± 0.00
2. France	— 2.13	2. - Netherlands	+ 0.94
3. – Germany	± 0.00	3. Denmark	+ 6.34
4. – Netherlands	+ 3.25	4. Great Britain	+ 8.07
5. - Denmark	+ 6.00	5. – Italy	+ 8.35
6. – Great Britain	+ 7.08	6. – Sweden	+ 11.54
7. – Czechoslovakia	+ 9.27	7. – France	+ 18.23
8. – Poland	+ 14.96	8. – Czechoslovakia	+ 18.56
9. – Sweden	+ 20.13	9. – Poland	+ 18.85

Potash.

1928-29		1933-34	
1. – France	— 1.06	1. – Germany	± 0.00
2. - Germany	± 0.00	2. – Netherlands	+ 6.86
3. – Czechoslovakia	+ 6.09	3. – France	+ 7.19
4. – Poland	+ 10.41	4. – Czechoslovakia	+ 7.68
5. – Netherlands	+ 15.86	5. – Denmark	+ 14,79
6. – Italy	+ 25,06	6. – Poland	+ 16.62
7. – Denmark	+ 32.64	7. – Sweden	+ 20.15
8. – Great Britain	+ 35.91	8. - Italy	+ 20.40
9. – Sweden	+ 44.50	9. – Great Britain	+ 24.39

Sulphate of ammonia.

1928-29		1933-34	
1. – Poland	— 24.93	1. – Netherlands	— 0.10
2. – Italy	— 1.42	2. – Germany	± 0.00
3. – Germany	± 0.00	3. – Great Britain	+ 11.92
4. – France	+ 2.92	4. – Denmark	+ 43.96
5. – Czechoslovakia	+ 3.71	5. – France	+ 21 65
6. – Great Britain	+ 13.11	6. – Poland	+ 31 10
7. – Netherlands	+ 20.94	7. – Czechoslovakia	+ 37 11
8. – Denmark	+ 28.08	8. – Italy	+ 38 19

Nitrate of soda

1928-29		1932-33	
1. – Germany	± 0.00	1. – Germany	± 0.00
2. – Great Britain	+ 29.88	2. – France	+ 16 56
3. – France	+ 34.27	3. – Great Britain	+ 33 66
4. – Czechoslovakia	+ 58.24	4. – Netherlands	+ 36 78
5. – Netherlands	+ 65.06	5. – Sweden	+ 42.27
6. – Sweden	+ 86.46	6. – Czechoslovakia	+ 73 95

Norwegian saltpetre (calcium nitrate) and Calcium cyanamide

Unfortunately for both the other important nitrogenous fertilisers, calcium nitrate and calcium cyanamide, there are no statistical price to be obtained in any extent, so that here any attempt to represent the exchange valuerelations must be abandoned. It may be noted that as regards the calcium nitrate, or Norwegian saltpetre, of Norwegian origin, the production greatly increased in 1930, when the transition was made from production of fertilisers at exclusively 13 per cent. of nitrogen to production mainly to 15.5 per cent. nitrogen content. Up to 1932 however the output of this fertiliser again considerably declined, *viz.*, for the 15.5 per cent. nitrogen content from 406,000 tons in 1930 to 282,000 tons in 1932, and for the 13 per cent. content from 45,000 to 14,000 tons. Also the world production of calcium cyanamide, which in 1930 amounted to 1,275,000 tons, had declined by 1932 to 625,000 tons. In the absence of data, it is not possible to discuss further the reasons for this decline.

CONCLUSIONS.

One of the essential results reached in this article is that the relations between prices have shown that the height of the prices of and the consumption of commercial fertilisers, and in particular of the nitrogenous fertilisers, depend

on the height of the prices of certain products, or on the extent of the areas under cultivation of the crops which yield these products, or on the two factors taken together. Moreover our investigation seems to have shown that the consumption of nitrogenous fertilisers in any case, and also of fertilisers in general, has been influenced especially by the cultivation of cotton and sugarbeet, while no determinable influence has been exercised by wheat, a crop with a preference for the nutritive material of the soil itself.

On the world market for nitrogen it is observed that after the great decline in the consumption of nitrate of soda throughout the world, more especially in Germany on account of the war, but also in recent years in the United States of America and in Great Britain, the nitrogen market is ruled by synthetic nitrogen, and in particular by the German Haber-Bosch manufacture. Further sulphate of ammonia, as a by-product of the gas and coke factories, has also lost much of its importance, although, since the decrease in the consumption of nitrate of soda in the United States and in Great Britain, sulphate of ammonia is in these countries almost the sole important nitrogenous fertiliser.

The international comparisons established between the exchange values of wheat and oats respectively and the commercial fertilisers maks it clear that the intervention on the cereal market undertaken in various countries in favour of the growers has had the effect of maintaining satisfactory price relations between products and means of production, or of establishing new relations of the kind. These comparisons, on the other hand, also show that in certain countries where there has been no such influencing of the cereal market, or in those countries where such measures have perhaps been applied but without the desired result, extraordinarily unfavourable conditions have sometimes arisen, the effects of which on the agriculture of the countries concerned it is impossible to gauge here, and in fact the question lies outside the scope of this article.

CURT KAPPSTEIN

Publications consulted:

1. INTERNATIONAL Yearbook of Agricultural Statistics, 1909-1933, International Institute of Agriculture, Rome.
2. MONTHLY Crop Report and Agricultural Statistics, 1931-1934, Int. Inst. Agr., Rome.
3. PRODUCTION et Consommation des Engrais Chimiques dans le Monde. Ed. 1913, 1914, 1924, Inst. Int. Agr., Rome.
4. STATISTISCHES Jahrbuch des Deutschen Reiches, 1900, 1905, 1910, 1911, 1913.
5. VIERTELJAHRSHEFTE zur Statistik des Deutschen Reiches, 1926-1934.
6. SINOPSIS Geografico-Estadistica de la Republica de Chile 1933.
7. GLAESEL Dr. E. J., Die Entwicklung der Preise landwirtschaftlicher Produkte und Produktionsmittel während der letzten 50 Jahre... Berlin, Parey, 1917.
8. BALLOD, Carl, Grundriss der Statistik. Berlin 1913.

9. SCHMITZ, Otto, Die Bewegung der Warenpreise in Deutschland 1851-1902. Berlin 1903.

10. DEUTSCHES Baumwollhandbuch, Bremen 1926.

11. APELT Dr. H. und ILGENS, Dr. R., Die Preisentwicklung der Baumwolle und Baumwollfabrikate. München und Leipzig 1914.

12. DONNER, Dr. Otto, Bestimmungsgründe der Baumwollpreise. *Vierteljahrshefte zur Konjunkturforschung.* Berlin 1930.

13. JAHRBUCH der oesterreichischen Zucker-Industrie, 1909, 1911, 1912.

14. LISTE Générale des Fabriques de Sucre, etc. Paris 1910.

15. CLAASEN, Dr. H., und BARTZ Dr. W., Die Zucker-Industrie. Leipzig und Berlin 1905.

16. JAKOBS, Dr. Hans, Die internationale Zuckerkonvention. Berlin 1928.

17. REPORT on the Sugar Beet Industry at Home and Abroad, Ministry of Agriculture and Fisheries. London 1931.

18. PAASCHE, Dr. H., Die Zuckerproduktion der Welt. Leipzig, Berlin 1905.

19. ROBERTSON, Dr. C J., World Sugar Production and Consumption. London 1934.

20. SMITH, Harold H., The High Price of Sugar. London.

21. United States Tariff Commission: Costs of Producing Sugar Beets, Part I-IX. Washington 1925 und 1926.

22. WRIGHT, Philip G., Sugar in Relation to the Tariff. New York 1924.

23. BRADBURY and Hirsch's Review of the Market for Sulphate Ammonia 1916.

24. STATISTICAL Supplement to the Final Report of the Nitrogen Products Committee. Department of Scientific and Industrial Research. London 1921.

25. EUCKEN, Walter, Die Stickstoffversorgung der Welt. Stuttgart und Berlin 1921.

26. GERMAN Kali Works Industry, Inc., The Potash Industry. Chicago 1901.

27. NORGE-SALPETER (Broschüre der Norgesalpeter-Industrie).

28. PLAGEMANN, Dr. A., Der Chilesalpeter. Berlin 1916.

29. SALLIOR, P. La Crise des Engrais, *La Nature*, Juli 1917.

30. TOBIANSKY D'ALTHOFF, Alfred, L'Industrie de l'Azote Atmosphérique. Paris 1914.

31. COTTON Year Book of the New York Cotton Exchange 1930-1933.

32. JOHNSON W. H. Cotton and its Production. London 1926.

AGRICULTURAL CO-OPERATION IN AUSTRIA (*Continued*).

§ 6. — CENTRAL CLEARING BANK (GIROZENTRALE).

Even in the time of the former Dual Monarchy the need was much felt for an organisation enabling the large credit institutions of the provinces to balance their surplus funds against applications. In consequence of unfavourable conditions, not always of an economic order, it never proved possible to set up a clearing centre for the various agricultural co-operative credit societies. In the new Austrian Republic it was essential in the first place to surmount a number of financial difficulties, and this went on till 16 August 1927, on which date a clearing house was at last successfully established, the *Girozentrale*, or central bank for balancing the payments for the Austrian co-operative societies.

The objects of this bank, which took the corporate form of a share company, are as follows: to facilitate the balancing of money exchanges between the federations and the co-operative societies, to arrange for the grant of mortgage loans or of credits on bills or other credits and to arrange for interest on capital deposited. For these purposes the bank is empowered to undertake the following business: to accept money from all comers on current account or in the form of cheques; in addition to accept money against cash orders of the co-operative federations which are members of the company, and also to take up bills, on account of the adhering co-operative federations and societies, as well as of individuals from whom it has received money, to buy and sell on commission from all comers, bills, money and foreign currencies (against cover paid in or previous delivery); to make loans on short term to co-operative federations associated with the business of the bank; to invest money in Austrian trust funds; to act as intermediary for clearing payments effected between co-operative federations and co-operative societies, etc.

In the foundation of the Central Clearing Bank (*Girozentrale*) the following organisations took part: the *Allgemeiner Verband fur das landwirtschaftliche Genossenschaftswesen in Oesterreich* and all the provincial federations of agricultural co-operative societies, with the exception of the Salzburg federation. These were in all ten, with the addition of three central organisations of artisans' co-operative societies (*Allgemeiner Verband deutscher Erwerbs- und Wirtschaftsgenossenschaften in Oesterreich*, the *Oesterreichische Zentralgenossenschaftskasse* and the *Zentralverband gewerblicher Erwerbs- und Wirtschaftsgenossenschaften Oesterreichs*). Further, the most important co-operative societies of the German *Reich* took part: the *Preussische Zentralgenossenschaftskasse*, the *Deutsche Raiffeisenbank*, the *Reichsverband der deutschen landwirtschaftlichen Genossenschaften* and the *Deutscher Genossenschaftsverband*. In view of the impoverishment and the want of funds hampering most of the co-operative societies and federations, it was also essential to secure for the Bank in case of emergency the credit backing of a large Austrian bank, the Land Credit Bank (*Bodenkreditanstalt*).

It was also considered desirable to obtain the participation of the Provincial Land Mortgage Banks, or at least of those which had in recent years entered into good business relations with the central federations to the mutual advantage of either side.

The foundation capital of the Central Bank amounts to 5,000,000 schilling and is divided into 20,000 shares, which are payable to bearer and completely paid up, and issued at the nominal value of 250 schilling each. The *Bodenkreditanstalt* has subscribed 2,000,000 schilling of the share capital on its own account, the *Preussenkasse* 1,500,000 schilling. This latter, it may be noted, was transformed by an ordinance of the President of the *Reich* of 21 October 1932 into the *Deutsche Zentralgenossenschaftskasse*, and placed under the control of the *Reich* as the credit institution for the whole of the *Reich*. A total of 1,500,000 schilling was also subscribed by three co-operative Banks of the *Reich*. Out of these shares most of the Austrian federations have subscribed 125 shares each only, so as to ensure the right of voting at the general meetings. However the opportunity has been left open to the co-operative societies to increase their holdings in the event of any increase in capital (§ 13). In order to maintain the character of a co-operative organisation, a fuller participation of the federations was arranged by the Administrative Council· out of 18 members of this Council, nine are delegates of the Austrian co-operative societies and the President is appointed from among these; seven are elected by the German co-operative societies and two only by the *Bodenkreditanstalt*.

In recent years important changes have come about in the institutions which took part in the foundation of the Bank, partly in consequence of the collapse of the money market, but partly also for reasons of a more general kind. The Central Bank has undergone a change in its constitution in so far as that when the *Allgemeine Oesterreichische Bodenkreditanstalt* was amalgamated with the *Oesterreichische Kreditanstalt fur Handel und Gewerbe*, advantage was taken of the opportunity to remove from the membership of the *Girozentrale* this large bank which had always occasioned a certain dissatisfaction among co-operative circles. In its place as a large shareholder, the *Oesterreichische Postsparkasse* was brought into the *Girozentrale*. By means of this substitution the *Girozentrale* rapidly gained autonomy, and independence of the capital of a large private bank, while the interest of a State institution was assured for its activity. As is well known the Austrian Federation itself acts as guarantor for all the engagements taken by the *Oesterreichische Postsparkasse*, which was founded in 1927 in place of the former post office savings bank dating from 1882.

Further reorganisation of the Central Bank was effected in March 1934 when, under a general agreement of the shareholders, the shares previously held by the co-operative federations of the German *Reich*, amounting to a total value of 3,000,000 schilling, were taken over by the Austrian shareholders. In consequence the administrative organisation of the Bank also underwent a change, as the German collaborators and the former managing director, the vice-presidents and the Executive Committee all withdrew. In this way the *Girozentrale* became a purely Austrian credit institution.

The Central Clearing Bank acts as guarantee for discount on behalf of the co-operative societies with the National Bank of Austria. Previously this Bank did not readily accept these agricultural bills, since there was no bank of sufficient standing among agricultural circles to answer for the solvency of customers. With the foundation of the Central Clearing Bank the money transactions of agriculture with the National Bank of Austria are placed on a new basis and obtain special facilities. It is moreover among the functions of the Central Clearing House to examine the credit possibilities of the different federations in order to arrange credit for them with full security. However as regards the right of audit on the part of the Bank, the functions of the legal supervisory body of the federations remain as before. No relation exists between this co-operative banking institution and the individual co-operative societies; it is linked with the societies only through the intermediary in each case of the respective federation. It establishes however the general lines of the working of the federations and thereby of that of the individual societies. It is understood that the co-operative societies must, so far as possible, in the first instance endeavour to balance their liquid assets and their deposits in their own localities, but that they must retain a certain reserve fund to be placed on deposit in the funds of the federation, at a fixed rate of interest, and the federations in their turn will deposit a reserve in the Central Clearing Bank, so that this latter may be in a position to balance the applications throughout the country within the actual credit possibilities.

This Central Bank thus serves as a clearing house for money transactions equally between agricultural co-operative societies and industrial societies. This is the more advantageous, as the larger quantity of liquid assets is usually in circulation in agricultural circles some months after the harvest, coinciding precisely with the largest credit demands of the industrial co-operative societies. The foundation of the Central Clearing Bank thus marks a real step in advance, not only in regard to co-operation but also to the whole of Austrian economy.

Originally the competence of the Central Bank did not extend to the consumers' co-operative societies, since for urban building and housing societies, savings and credit banks, thrift and provident societies, co-operative societies of production and labour, a special *Arbeiterbank* had been set up in 1922 in the legal form of a share company and not of a co-operative organisation under Austrian law. The share capital of 4,000,000 schilling was however in the hands of the co-operative societies concerned. The deposits in this Bank amounted to 4,453,375 schilling in 1923, and in 1932 to 54,313,678 schilling.

During February 1934 the *Arbeiterbank*, the credit organisation of the urban working classes, was dissolved by Ordinance and transferred for liquidation to the State Credit Institute for Public Undertakings and Works (*Kreditinstitut für öffentliche Unternehmungen und Arbeiten*). After the closing of the *Arbeiterbank* the Central Clearing Bank of Austrian co-operative societies had taken over also the Wholesale Company of Austrian Consumers' Unions with the consumers' societies belonging to this organisation. This led to a noticeable expansion of its field of activity and contributed to increase its importance for Austrian economy in general.

The rate of interest for borrowing fluctuated at the central banks during the years 1928 to 1932 between about 6 and 7 per cent.; the rate on loans was rather higher, from about 8 to 11 per cent., the interest at the National Bank of Austria also fluctuating, both for deposits and loans, between 6 and 8 per cent. In 1933 the average rate of interest fell to 5 per cent. On 27 June 1934 the General Council of the National Bank of Austria decided to lower to 4 ½ per cent., with effect from 28 June, the rate of discount on bills of exchange, warrants and securities. The rate of interest for deposits at the different banks, including the Central Clearing Bank. was, from 1 July 1934, fixed at around 3 ¼ per cent. according to the kind of deposit, whether short term or long term, and according to the location of the headquarters of the bank, whether situated at Vienna or in the capital of one of the provinces. Deposits in cash made by the Central Clearing Bank with other banking institutions may as a maximum earn an interest of 4 ½ per cent. On the other hand the Central Bank is authorised to pay interest up to 4 ½ per cent. on cash deposits made by the central co-operative banks which undertake local clearing house operations, and on those made by provincial credit institutions which, at the date on which these agreements came into force, were shareholders of the Central Bank.

According to the report of the Central Clearing Bank the balance sheet for 1932 was closed as follows (*Kompass*, Wien 1934, p. 429)

Balance sheet Closing of the Central Clearing Bank on 31 December 1932 (schilling).

Assets.

Cash in bank, National Bank and Post Office Saving Bank	2,228,721
Assets at banks	525,308
Bills of exchange	9,605,327
Stocks or securities held	1,404,257
Share in the Credit Co-operative Society for Industrial Enterprises at Vienna	251,000
Debts due to Bank	5,272,490
Investments	1
Other assets	8,240
Letters of credit and engagements assumed	49,999
Transitory assets[4]	116,398
	19,462,241

Liabilities.

Share capital	5,000,000
Reserve Fund	230,000
Special Reserve	20,000
Debts owed by Bank	13,972,155
Transitory liabilities	15,435
Letters of credit and guarantees	49,999
Profit	174,652
Total	19,462,241

Allocation of profit.

Reserve Fund	100,000
Carried forward	74,652

The year 1933 shows a balance sheet of 22,000,000 schilling. The net profit for the year was 101,947.20 schilling. The net return proceeds would have been still more favourable if the Central Clearing Bank had not had to meet certain quite exceptional charges. The economic and financial situation in 1932 as also in 1933 was, for the Raiffeisen banks also, influenced by the unexpected failure of the *Oesterreichische Kreditsanstalt.* The want of confidence extended beyond the bank endangered. However as stated in the report of the *Allgemeiner Verband der landwirtschaftlichen Genossenschaften*, the co-operative societies were able, thanks to the soundness of their organisation, to meet this severe strain due to external causes without requiring external aid. The Central Clearing Bank in 1933 was in a position to meet, from its own funds and deposits and without having recourse to a credit at the National Bank of Austria, all applications for financing made to it. In its capacity as clearing house of agricultural co-operation it has not merely provided for the repayment of the surplus funds entrusted to it by the federations and central banks, but it has also granted considerable credits.

§ 7. — Co-operative Dairies.

In accordance with the natural conditions governing agricultural production in Austria, stock-breeding and dairying take the first place, apart from forestry. The distribution of the cultivable areas of Austria is sufficient indication of this; there are 3,140,000 ha. of forest land and 4,360,000 ha. of agricultural land. Of this latter, 62 per cent., or 2,610,000 ha., consist of pasture lands and fodder crops which naturally take the first place and form the basis of the stock breeding and dairying so widely diffused through the country. Out of 433,300 farms in Austria, stockbreeding is combined with arable farming on 412,283, and only 21,077, or scarcely 5 per cent. of all the farms, are entirely without live stock. The medium-sized farms of from 5 to 20 hectares carry the most stock.

If the total value of the agricultural production, not including forestry, is estimated at 3,330,000,000 schilling, the dairy industry by itself accounts for 740,000,000 or nearly 20 per cent., and no other primary production of Austria approaches this value by a long way. Stock breeding is thus the backbone of all Austrian agriculture.

It is this marked importance of dairying in Austrian agriculture that gives their significance to the dairy co-operative societies. These societies aim at an increase in the milk production and also at a higher consumption of better quality milk and therefore a more remunerative price. The co-operative dairy collects the milk of its members and transforms it as required. A distinction may be made in Austria between the small co-operative dairies which collect the milk for direct distribution, and the large dairies, such as were founded about 1925, which are equipped with modern machinery, and undertake to utilise the milk supplied by the farmers who are members of the society and by the small co-operative dairies and to transform it, or that part which is not consumed as

fluid milk, into butter and cheese. In conformity with § 11 of the rules of these societies, every member has the right – *i.e.*, actually the right and not a compulsory obligation – to deliver to the society the milk produced on his farm in accordance with its requirements and with the arrangements agreed.

This is not, of course, an instance of co-operative production, properly so called, since the milk is produced on the individual peasant or family farms, but rather, to be exact, one of co-operative associations of milk producers who carry out one part of the handling process by co-operative methods In § 1 of the rules the following statement occurs: " The object of the co-operative society is to transform and to utilise the milk produced on the farms of its members, at their request and on their account. " These associations might be called co-operative societies for partial production

In order to improve the quality of the butter, the Federation of co-operative societies of Lower Austria, which is the most important Dairy Federation in Austria, inaugurated on 1 July 1927, in all co-operative dairies, regular monthly inspections of butter. This inspection is effected on the 100 points system, usually employed in Austria, and the trade mark is granted only on condition that at least 80 points have been scored. The inspection of butter for quality has made possible the introduction of an official mark, on which appear the arms of Lower Austria with the words: Official Butter Control by the Lower Austrian Chamber of Agriculture. As a result of this standardisation of the butter and also of the organisation of marketing by the Lower Austrian Dairy Federation, it has been possible to place regularly on the market butter produced by the co-operative societies. At Innsbruck, in the Tyrol, there has been in existence since 1926 an Exchange of dairy products which has proved of great advantage for price fixing and marketing of butter.

Before the war, the dairy societies were fairly well developed, but war time conditions, the decline in dairy production, the reduction in stock feeds and the maximum prices of milk which were kept as low as possible, all contributed to injure the dairy industry. The number of cows in Lower Austria, for example, fell from 345,969 in 1900, to 234,019 in 1918, a decline of nearly 27 per cent. The average milk yield per cow and per day was before the war about five litres, and in 1917 three and a half litres only.

After the war, the situation of the co-operative dairies became very difficult, as was that of the whole country. In this critical period, the credit of 6,000,000 schilling granted by the League of Nations in 1926 for the encouragement of dairying was of considerable assistance. This credit was granted, in accordance with a proposal jointly submitted by one of the Federal provinces and by a Federation of agricultural co-operative societies or an important agricultural corporate body, these organisations guaranteeing the full and punctual repayment of the credits. The loans were made by the Ministry of Agriculture for 18 years and at a rate of interest with gradual repayment of the capital at 9.94 per cent.; they are paid over by the National Bank of Austria. Out of the total credits granted by the League of Nations, Lower Austria has obtained 1,990,000 schilling, Styria 1,555,000 schilling, Burgenland 500,000 schilling, Carinthia 400,000 schilling, Voralberg 289,000 schilling and Salzburg

40,000 schilling. With these funds it has been possible to establish 53 co-operative undertakings.

Co-operative dairies occupy the foremost place among the co-operative societies for agricultural production (on 1 January 1934 there were 983 dairies), and the second place among all the agricultural co-operative societies. This applies equally to their number and to the value of the products placed by them on the market.

The co-operative dairies are most widely diffused in Lower Austria, a region of pasturelands, where they number 700 out of the total of 983. In 1932, of the milk supplied to the town of Vienna 66 per cent. came from the co-operative dairies of Lower Austria. An idea will be gained of the output capacity of the co-operative dairies from the business done by the Lower Austrian Dairy (*Niederösterreichische Molkerei*) established at Vienna under the form of a central co-operative organisation. Founded in 1899 with 13 member societies and with an annual handling of 50,000,000 litres of milk, the number of the member societies had risen by 1 January 1933 to 153 co-operative societies for transformation of milk, while the milk collected in 1933 amounted to 58,000,000 litres, or 500,000 more than in 1932. The daily average collection of milk amounted to about 160,000 litres.

The extent to which the co-operative dairies organise the small farmers is seen from the fact that the 23,314 members of the 345 Lower Austrian dairy societies on 1 January 1932 own cows as follows:

in 7,651 cases only one cow is owned;
» 6,172 cases only two cows are owned;
» 3,734 cases only three cows are owned;
» 2,451 cases only four cows are owned;
» 1,428 cases only five cows are owned;
» 1,707 cases only six to ten cows owned and
» 191 cases more than ten cows are owned.

The economic strength of the co-operative dairies may be demonstrated by their share in 1932 in the total manufacture of butter and cheese in Austria. According to Prof. Jutila, Minister of Agriculture of Finland (Report to the XIIIth International Congress of Agriculture, Budapest, 1934) the quantity of butter made by the co-operative dairies in Austria was 12,000,000 kg., or 92 per cent. of the total butter production of the dairies (13,000,000 kg.) (1), and the cheese made was 16,200,000 kg., or 92 per cent. of the whole quantity made by the dairies *i.e.* 17,500,000 kg. In consequence there is manufactured in the co-operative dairies more than 90 per cent., whether of butter or cheese, of all the Austrian

(1) The total production of butter may be estimated for 1933 at 20,000,000 kg. — unfortunately no official statistics are available — including about 7,000,000 kg. of farm butter which is consumed for the greater part on the farms themselves.

production of cheese and butter. The measures taken in favour of dairying in general refer then almost exclusively to the co-operative dairies.

Since the conclusion of the war dairy production has risen from 480,000,000 litres in 1919 to 2,800,000,000 litres in 1933, an increase of 583 per cent.

The milk yield took on, especially since 1929, so accelerated a pace that, in view of the decline of industrial production and of reduced consumption, the dairy problem is concerned less with the production of milk than with its marketing. Not only has the national market been saturated by the Austrian production, but a considerable export has been possible. The volume of butter exported during the years of crisis may be seen from the following figures (in quintals):

1929	10,028				
1930	18,649				
1931	12,976				
1932	7,097				
1933	11,819	*including:*	5,544	to	Germany
			4,843	»	Great Britain
			420	»	Italy
January-August 1934	16,430	*including:*	9,989	to	Great Britain
			3,297	»	Italy
			1,935	»	Germany
			1,106	»	Belgium

While in 1926 it was necessary to import 210 truckloads (1) of butter, in 1930 it was already possible to export 186. In recent years the export has declined as compared with 1930 in consequence of the contraction of the external market, but in 1933 it was none the less possible to export 4,720 quintals more than in 1932. In 1934 the export has again increased; in the first eight months alone nearly as much was exported as in the course of the whole year 1930. But the price of the butter exported was much lower than even in 1933. Whereas in the first eight months of 1933 butter was 2.24 schilling per kg., this price fell in 1934 to 1.30 schilling. It was only in the last months of 1934 that the price improved by 40 groschen per kg. Another characteristic feature is the change that came about in the two last years, 1933 and 1934, in the structure of the Austrian export trade in butter directed towards the different countries, a change which will be noted merely in passing. In any case, even this larger export is insufficient, since the production of butter has increased to a still greater extent.

With this may be associated the decrease in the internal sales. The consumption of milk of the population of Vienna fell in recent years from 0.41 to 0.32 litres per head per day in consequence of the distress prevailing in large classes of the population (due largely to unemployment). The per capita consumption

(1) 1 truckload = 10 metric tons.

of butter also declined in Vienna to 2.75 kg. per annum and that of cheese to 4 kg. per annum, while the consumption of milk and milk products is three times as much in Switzerland, in the Netherlands, in Denmark, etc., as in Austria.

Parallel with the collapse in butter prices in 1933 and with the restriction of exports, there was an increase in the supply of fresh milk to Vienna, coming from regions which formerly, on account of distance, transport difficulties, etc., had been obliged to transform their milk into butter and cheese. All the Federated provinces together in 1933 supplied to the town of Vienna, 272,000,000 litres as compared with 27,000,000 litres only in 1918, in consequence ten times as much as in that year. In view of the resulting flooding of the Vienna market and the impossibility of selling for direct consumption any large proportion of the fresh milk, it had to be transformed into butter in Vienna, although this was unremunerative from the economic standpoint. The rivalry between the butter prices which depend on the prices of the world market and the milk prices the amount of which is determined by the local price then broke out in a particularly violent form. Producers and dealers in milk vied with each other in offering milk at low prices in order to snatch the sales.

With a view to eliminating this unhealthy rivalry between two products, fluid milk on the one hand, and manufacturing milk on the other, and to obtaining stability of dairy production, a law was promulgated on 17 July 1931 which created a Milk Equalisation Fund (*Milchausgleichsfond*) in the form of a corporate body, the object of which was to establish the greatest degree obtainable of regularity in the supply of milk and milk products to the market. The basic idea in setting up this fund was to raise a levy on fresh milk and therefrom to compensate the dairies where reduction of financial returns had resulted from transformation of their milk into butter and cheese.

Those dairy societies which supply fresh milk in consuming centres of more than 5,000 inhabitants are expected, as their contribution to this fund, to meet a levy on their price, of two or three *groschen* per litre, in favour of those who are obliged to transform their milk into butter, the object being to secure an approximately equal valorisation of the milk for all the farmers. In this way the co-operative dairy which usually transforms milk into butter and cheese can no longer have a special interest in undertaking the supply of fresh milk. The subsidies may be made available through the intermediary of the central agricultural and forestry associations, or by that of the co-operative federations, which undertake subsequently to distribute them to farmers and to dairying undertakings.

For the purpose of the payment of these equalising subsidies, a Cominittee, which is also administered by representatives of the co-operative dairy, establishes quotas for the supply of the Viennese market in fresh milk coming from the neighbouring regions of production. These quotas correspond to the quantities of fresh milk regularly absorbed for the supply of the Viennese market and coming from these regions, the object being to secure in this way the greatest possible stabilisation of milk prices.

The law on the Milk Equalising Fund imposes, it is true, a charge on the milk producers, although this is balanced by the guarantee of a fair price. The

effect of the equalising fund has also been that of refunding to the exporting firms the differences between the external prices of butter and the Vienna price, thus enabling them to resume export. The Vienna market was thereby relieved of the milk surplus and it became possible to obtain better prices. In consequence of this regulation of the market a more systematic distribution of the milk production was also gradually established in accordance with the natural areas of production, *viz.*, the zones in the immediate neighbourhood of Vienna supplying milk for direct consumption, and the more distant dairying zones mainly engaged in transformation of milk, especially in the region of the alpine pastures.

The activity of the Milk Equalisation Fund has been supplemented by that exercised in virtue of the Milk Regulation Ordinance (*Milchregulativ Verordnung*), which introduced a regulation of milk prices intended to prevent the indiscriminate offering for sale in large consuming centres of milk the hygienic quality of which might be open to challenge. The maximum and minimum prices were to be fixed in such a way as to leave a fair margin to the dairies, the milk dealing firms and other retailers, and so that at the same time the purchasing power of the population would be taken into account. These fixed prices (§ 9 of the Ordinance) are established without regard for the quota to be paid to the Milk Equalisation Fund.

The value of the milk administered by the Milk Equalisation Fund amounted in 1933 to a figure of at least some 250,000,000 schilling, the equivalent of a quantity of at least 1,000,000,000 litres. In 1934 there was an export of some 320 truckloads of butter and 200 of cheese. At the same time about 120 truckloads of butter were transformed for Austrian consumption into melted butter and at least 60 truckloads of cheese into soft cheese, both being made available for consumers at considerably reduced prices. These quantities of butter and cheese taken together correspond, according to the President of the Provincial Chamber of Styria, M. Kraft, to a surplus production of about 140,000,000 litres of milk for 1934, a quantity which, apart from the intervention of the Milk Equalisation Fund, would have caused a complete collapse of prices of milk and milk products

" Dairying in Austria, " to quote M. Reither, Governor of Lower Austria and at present Minister of Agriculture, speaking at the General Assembly of the Lower Austrian Dairy Federation on Vienna on 17 May 1934, " possesses, and especially in Lower Austria, an organisation such as no other European country possesses, If it did not exist, many farmers would find themselves compelled to abandon dairying production. Up to the present all other possibilities have been exhausted and we shall now proceed to the last, planned economy. "

The planned economy, to which the speaker refers, is for the time being based on the Milk Law promulgated on 17 August 1934, the third among the measures taken recently for the protection of the dairy industry, and relating to the regulation of the whole trade in milk. In substance, the new regulation consists in the fact that, in accordance with the second part of the law in question, the supply of milk to the larger towns and to the city of Vienna will in future be effected according to a plan established in advance. The Minister of Agriculture must

every year and before 1 October prepare a scheme of supply for the next civil year, in collaboration with the Burgermeister of Vienna, the central agricultural corporations and the Management Committee of the Milk Equalisation Fund. In this plan will be established the quantities of milk which may be daily supplied to Vienna for direct consumption and for transformation and the quantities produced in Vienna itself that may be placed on sale. The maximum quantity of milk allowed must be fixed in such a way that the demand is covered and that at the same time there is no congestion of the market.

All persons desiring to deliver milk to Vienna must notify their agricultural corporation before 1 October, stating the date, the quantity and the destination (direct consumption or transformation) of the milk delivery which it is intended to make. In the plan prepared for the milk supply milk quotas are assigned to the different regions of production which will be re-assigned by the Chambers of Agriculture in these regions among the registered suppliers to whom delivery orders will be issued. At Vienna a Milk Office will also be established the duty of which will be to confirm the delivery orders and to check the sale notes.

The law on Milk Marketing came into force on 1 January 1935. The milk requirements of Vienna for 1935 will amount to 647,000 litres per day, but in virtue of the new law the delivery offers have reached 1,090,759 litres of which however 793,440 litres only will be accepted, 20 per cent. of the milk supplied being transformed in Vienna.

This State intervention in the milk trade, such as has already come about, for example, in Germany, England, the Netherlands and Hungary, is designed to consolidate to the utmost possible the milk market, and to introduce a practical guarantee of the prices of milk by establishing a normal relation between production and demand. The Milk Equalisation Fund still continues to exist, but its activity is now brought under the general legislation on milk.

In this way it is intended also to prevent a misuse of the Milk Equalisation Fund facilities such as would make it difficult adequately to maintain butter prices. In view of the registered delivery offers, it becomes impossible to market fresh milk without paying the contribution due to the Milk Equalisation Fund, and thus impossible to place a surplus on the market.

By the formation of co-operative societies for milk transformation and by the improvement in stock breeding and the improved care given to dairy stock, there has been secured in Austria in the sphere of dairying a noticeable increase in production, although the world economic crisis has very perceptibly affected the nascent national economy of Austria in its period of consolidation. In the mitigation of the marketing problem, a problem not confined to the narrow limits of the Danubian Republic but affecting the whole world, agricultural co-operation has played a considerable part. Undoubtedly co-operation by itself, no more than any other economic factor taken in isolation, could not contribute greatly to the remedying of the general crisis. It may however be safely assumed that the dairying crisis would have been much more severe in Austria if there had not been so satisfactory a development of co-operation in that country.

§ 8. — Co-operative Societies for Breeding and Sale of Live Stock.

For stock breeding, as for dairy farming, the territory of Austria may be divided into two main zones, according to the main direction taken by the animal production: the alpine region, Vorarlberg, Carinthia, Salzburg and Tyrol with the wide mountain pastures where the main object of the animal husbandry practised is that of breeding, and the eastern plain where the stock farming consists chiefly in the production of milk and meat. It is naturally somewhat difficult to trace a sharp line of demarcation between these two zones, and in consequence the co-operative live stock societies may, according to the purpose with which the breeding is carried on, assume the form of breed associations properly so-called, or of dairy societies, or of both at once. The measures which have been taken for developing the zootechnical industry by the principal agricultural associations of the different countries of the Confederation take these various directions of live stock breeding into account.

The object alike of the co-operative breed societies and of the co-operative stock marketing societies is the general encouragement of stock breeding with special reference to the purity of the breeds. This is especially important for Austria where one finds a whole series of different cattle breeds on a territory of relatively limited extent. For example, the red spotted breed (Simmentaler) which is the most widely diffused, forming nearly 36 per cent. of all the cattle in the country and found especially in Burgenland, Lower Austria, Upper Austria, Styria and the Tyrol; the Pinzgau breed (Salzburg, Tyrol, Upper Austria, Styria) including about 20 per cent. of all cattle; the Murboden breeds, about 15 per cent. in Styria; the Brown Alpine cattle, 10 per cent., especially in the Vorarlberg, Western Tyrol, etc.; the Waldviertel, 8 per cent., etc.

The co-operative breed societies endeavour to increase the yield capacity of the animals in accordance with the special purpose of the breeder in each case. This purpose may consist frequently in combined aptitudes, as in the case of the Simmentaler and the Pinzgau breeds, where the breeding is directed equally at developing work capacity, fattening aptitude and good quality meat capacity. In consequence, however, of the progressive rationalisation of agriculture and taking into account the economic grounds and those of trade policy, the object in breeding is frequently to obtain a special aptitude, *e. g.*, milk in the case of the Brown cattle, meat with the Waldviertel breed, etc.

The activity of the co-operative stock marketing societies consists in purchase of breeding animals and grant of these animals to members for breeding purposes on their farms; joint acquisition of pasture grounds, whether on lease or by purchase, for the breeding animals of members; co-operative summer pasturage of the young animals; co-operative sale of breeding animals selected for sale from among those belonging to members; the promotion of sale of stock through a stock sales and information bureau, etc. In accordance with § 9 of the rules, pedigree certificates are issued by the officer in charge of the herd book in respect of the origin of the animals bred under the auspices

of the co-operative societies, such certificates being based on the notes contained in the herd books. A progressive development may be noted of the co-operative breed societies which undertake generally to keep in strict order the breed records and the herd books, as well as to carry out the testing of the milk obtained, in such a way that at the present time the pedigree and the yield certificate can practically always be supplied at the occasion of shows and transactions relating to calves either exhibited or sold.

The co-operative societies for sale of stock are relatively the most recent form of co-operative organisation, since in this direction special difficulties have been encountered in dispensing with middlemen dealings. The live stock trade is always very complicated in itself, and it cannot always be assumed that the members will easily acquire the technique of the trade and the knowledge of the markets.

The greater number of co-operative societies for breeding and marketing of stock were on 1. January 1934 to be found in Lower Austria, that is to say 310 out of a total of 445. According to Schrotterer (1) the importance, from the point of view of stock breeding of Lower Austria does not in any way correspond to its high percentage share in the total head of cattle in Austria, for the reason that in Lower Austria the calves are driven off to the butcher, and the cows kept solely for milking and subsequent fattening, in view of the very large demand on the Vienna market for meat. In consequence, it is the co-operative marketing of live stock, and not stock breeding, which is of primary importance in Lower Austria. The second place falls to Styria with 96 co-operative societies, followed by the Tyrol which has only 15, although according to Schotterer, these are the best of all the co-operative live stock societies in point of organisation. On the same date there were only 13 societies of the kind in Carinthia, 2 in Burgenland and finally one in Vorarlberg.

The co-operative breed societies are grouped in each province for each breed in 23 Breed Federations, for example, the Federation of Pinzgau Breeders at Salzburg, that of breeders of Simmentaler cattle in Upper Austria, that of Brown cattle breeders in Styria, etc. In Lower Austria alone these societies are not grouped in Federations, but are directly subordinate to the Provincial Chamber of Agriculture.

The development of these societies began before the war as a result of the law of 30 December 1909 on the encouragement and improvement of live stock. The Farmers' Live Stock Office (*landwirtschaftliche Viehverwertungsstelle*) was founded in Vienna, for the purpose of enabling farmers to obtain better returns from their live stock and to arrange for direct sale to consumers. It did no business on its own account, but accepted slaughter cattle from the various agricultural co-operative societies for the market and paid to the societies the proceeds from the sales. In this way the Vienna market was, before the war, increasingly supplied with beasts at prices corresponding to the requirements of the co-operative societies. Although this institution was not established on

(1) Wirtschaftliche Grundlagen und die Entwicklung der Rindviehzucht in den Oesterreichischen Bundesländern, Salzburg, Kärnten, Tirol und Vorarlberg während der letzten Jahre. Hannover 1933.

co-operative principles, it proved of great economic and commercial advantage to the co-operative stock marketing societies, founded after 1909.

The basis for the development of Austrian stock breeding in the years immediately succeeding the war was given by the law on the encouragement of stock breeding which was enacted in 1922. This law related to: regulation of the keeping of bulls by co-operative societies and communes; improvement of the co-operative organisation of stock breeders; practical provision for the keeping of herd books and for milk recording; organisation of stock markets, etc. As a result of these measures, there has been a great increase in the output of products of cattle farming and it now forms one of the most important elements in the national economy of Austria.

The demand for meat in the Provinces of the Republic is almost completely covered by the national production, a result which is also due to the co-operative live stock societies. On the largest slaughter cattle market at Vienna, the supplies coming from the country itself are constantly increasing. Thus while in 1930 national production supplied to the Vienna market 48,566 head of cattle and the imports amounted to 104,822 head, this last forming thus two-thirds of all the supply in beef for this market, in 1934 the national production was 109,000 and the importation 24,000, or less than one fifth of the whole supply. While the national production has more than doubled, its contribution to the victualling of the country during these four years, the imports have shrunk in the same time to one quarter.

The pig production especially has made great progress since 1930. The national supplies increase rapidly, from 277,012 head in 1930 to 625,840 in 1933 and at the same time the importation of pigs from abroad is reduced from 737,000 to 465,000 in the respective years. The proportion of imports to the national production is thus reversed. The trade balance of the first half of 1934 reveals a further considerable diminution of the imports of live pigs, which have fallen from 332,000 quintals in January to June 1933 to 274,000 quintals in January to June 1934, while imports of pork meat have fallen from 42,000 to 27,000 quintals.

This tendency of commercial policy will hardly be taken as a symptom of autarchy, or as an intentional withdrawal on the part of Austria from foreign economic contacts, but rather, in the present conditions of multiplying restrictions in the international market, as a proof of the vitality of Austrian agriculture and as the expression of the national resolve to attain so far as possible economic independence.

Austria will remain however, as regards fat pigs, dependent as before on foreign supplies, although the home market in pork is supplied entirely from national resources and an export of pigs has even been in contemplation. On the other hand Austria is compelled to keep the supply of pigs to the Austrian markets partly open to the countries of Eastern Europe (Poland, Hungary and the Balkan States), because it is necessary to reserve to these countries a certain quota of pig imports as balancing Austrian exports of manufactured goods. The import quota of pigs from Poland, for example, has been fixed at 2,700 head per week.

Pig fattening has been restricted by an Ordinance of 27 October 1933. It was thereby enacted that on commercial undertakings having no direct connection with an agricultural production of suitable feed two pigs only may be kept, and on farms where there is an adequate self supply of feed not more than 100.

In view of the increase in national production and the simultaneous decline in the purchasing power of the population, the problem of the prices and marketing of animal products is, as with dairy products, one of the most important for the general interest. In the course of the years 1930-33 the prices of cattle fell on the Vienna market, which is the largest consumers' market in all Eastern Europe, by 20 per cent. and pig prices by 24 per cent., without any commensurate drop at the same time in costs of production.

Live stock prices were, according to official statistics, as follows before and after the war (per kg. of live weight in schilling, annual average):–

Years	Oxen	Cows	Calves	Pigs	Years	Oxen or Cows for fattening	Pigs for meat
1909	1.08	0.91	1.58	1.76	1927	1.41	2.17
1910	1.17	1.18	1.84	1.96	1928	1.35	1.95
1911	1.30	1.30	1.96	1.76	1929	1.50	2.37
1912	1.54	1.32	1.88	1.76	1930	1.45	2.02
1913	1.53	1.28	1.77	1.72	1931	1.19	1.50

In respect of stock for fattening, in particular oxen and cows, the annual average prices were in 1927-28 a little higher only than the pre-war, but during the years 1930-31 they were decidedly lower. Prices of slaughter pigs alone maintained a better level during 1927 to 1930, but in the other years these too fell as compared with the pre-war prices. Since 1931, moreover, live stock prices have shown a further downward tendency, as appears from the Vienna market quotation for May and June (schilling per kg.):—

	1933	1934
Live oxen	1.16	1.0
Calves	2.0	1.60
Pigs for slaughter	1.97	1.35
Live pigs	1.60	1.15

The difference affecting the stock farmers of Austria unfavourably is 13.8 per cent. for cattle, 19 per cent. for calves and from 28 to 30 per cent. for pigs.

Attempts are being made by means of various measures, in which the co-operative societies play an important part, to organise the market as effectively as possible, to balance supply and demand, and to slow down somewhat the much accelerated pace of the development of production. The organisation of the sale of slaughter stock, of meat and of pork products is regulated by the law

of 31 October 1931 on sale of live stock. The offer of slaughter stock on the cattle markets, as also the placing on the markets of meat and pork products is permissible only by the consent, renewed weekly, of the Austrian Stock Marketing Office (*Viehverkehrstelle*) in the Ministry for Agriculture and Forests, or of the organisations empowered thereby. This office was founded in 1907 on the initiative of the General Federation of Agricultural Societies. Import of cattle and meat products from abroad is authorised only on condition that it does not injure the national production. The stabilisation of prices due to this regulation of the market has given the stock fatteners an opportunity of undertaking fattening of cattle on a large scale. In this way, the mountain regions which produce the animals for fattening and the pig farming enterprises have had adequate opportunities of marketing. This law has been of decisive importance for the activity and progress of co-operative societies for breeding or for sale of stock, for in this way the stabilisation of bids and prices, which were previously subject to great fluctuations, has been effected.

Mention may also be made of the law of 30 June 1932 on the credits granted in favour of fatteners. In virtue of this law, it has become possible to obtain loans on pledge of stock in course of fattening. The three institutions authorised to grant credits in favour of fatteners are the *Wiener Vieh- und Fleischmarktkasse*, the *Girozentrale*, and the *Deutsch-Oesterreichische Wirtschaftsverband fur den Viehverkehr*. The first and the third of these institutes grant credits for fattening mainly to large farms. The Girozentrale, or Central Clearing Bank, mainly undertakes credits of this kind for the small farms. Where Raiffeisen banks are in existence, the applications for credit for fattening are passed through them, otherwise the applicants address the Central Clearing Bank directly.

An extension of the regulation of the stock trade is supplied by the Law of the Stock Fund of 22 December 1932, the object of which was the formation of a fund for the encouragement of stock sales, sales of meat and of other food stuffs produced in the country. This law prescribes the imposition of a special levy which must be paid to what is known as the live stock fund, and which is intended to meet the margin between the external prices of slaughter stock and the Austrian prices. The financial resources of the fund are administered by a committee formed by the industrial corporations and will be applied on the one hand to the encouragement of the consumption of meat and on the other to the promotion of the export of breeding animals and live stock for general purposes.

All these measures illustrate, moreover, the entrance of planned economy also into stock farming and stock dealing, by the regulation of the production of meat, by the control of the market, and, in addition, by price formation. These new principles of agricultural policy may more easily find their realisation in the country thanks to the grouping of farmers in their vocational associations and in the rural co-operative producers' societies.

M. TCHERKINSKY.

(*To be continued*)

PUBLICATIONS RECEIVED BY THE LIBRARY

Books.

General.

ASSOCIAZIONE FRA LE SOCIETÀ ITALIANE PER AZIONI, ROMA. Società italiane per azioni. Notizie statistiche, 1934. XIV edizione. Roma, Tip. Castaldi, [1934], 2487 p.

INDICATEUR DE LA PRODUCTION FRANÇAIS 1934. 17ème année de publication. Paris, Association nationale d'expansion économique, [1934]. 512 p.

History of Agriculture.

LESKOSCHEK, F. Geschichte des Weinbaues in Steiermark. Graz, Leuschner & Lubensky, 1934.
v. 1. Die Geschichte und Topographie des steirischen Weinbaues von der vorrömischen Zeit bis zum Ausgang des 13. Jahrhunderts. 1934. 56 p.

MOLINA, A. E. Esbozo de la historia de los primeros diez años de la revolución agraria de México (de 1910 a 1920). México, Talleres graficos del Museo nacional de arqueologia, historia y etnografia, 1932. 3 v.

Rural Sociology.

LEMONNYER, A., J. TONNEAU, [et] R. TROUDE. Précis de sociologie. Marseille, Editions Publiroc, [1934]. 503 p.

BANNERJEA, DEVENDRA NATH. Das indische Bauerntum unter britischer Herrschaft. Berlin, Ebering, 1934. XV, 165 p. (Volkswirtschaftliche Studien. hrsg. von E. Ebering, Hft. 43).

Political Economy.

HARMAJA, L. Effects of the war on economic and social life in Finland. New Haven. Yale university press, 1933. X, 125 p. (Carnegie endowment for international peace. Division of economics and history. Economic and social history of the world war. Translated and abridged series).

INNIS, H. A. [and] A. F. PLUMPTRE. The Canadian economy and its problems. Toronto, Canadian institute of international affairs, 1934, 356 p.

Legislation.

ANNUAIRE DE LÉGISLATION ÉTRANGÈRE publié par la Société de législation comparée contenant le texte des principales lois votées en 1931. 2ème série. 29ème année. 59ème année de la collection. Paris, Librairie générale de droit et de jurisprudence, 1932. 573 p.

CAPALOZZA, C. Compendio di legislazione sociale. Milano, Hoepli, 1935. XXXVI, 320 p. (Manuali Hoepli).

GESETZE UND VERORDNUNGEN ÜBER DIE MILCHWIRTSCHAFT. Eine Sammlung der zum Neuaufbau der deutschen Milchwirtschaft erlassenen Gesetze und Verordnungen. Mit einer vierfarbigen Wandkarte mit Abgrenzung der Milchwirtschafts und Milchversorgungsverbände. 3. Aufl. Hildesheim, Molkerei- Zeitung, 1934. 255 p.

OLLIVERO, L Per una nozione giuridica dell'azienda agraria. Torino, Arduini, 1934. 160 p.

TRIFONE, R. Le persone e le classi sociali nella storia del diritto italiano. 2ª ed. Napoli, Jovene, 1933. 306 p.

Rural Economics.

AGRICULTURAL ECONOMIC SOCIETY. Journal of proceedings of the Agricultural economics society. Report of conference held at St. John's College, Oxford, 29th June to 2nd July 1934. Reading, [Bradley & son Ltd], 1934. 115-187 p.

INTERNATIONAL CONFERENCE OF AGRICULTURAL ECONOMICS 3ème, Bad Eilsen, 1934. Vorträge und Verhandlungen über die Weltagrarkrise. Deutsche Ausgabe. Leipzig, H. Buske, 1934. VII, 445 p

GRINTESCU, E. Probleme agrare. Bucureşti, « Universul », 1934. 247 p. [The Agrarian Problem].

Agricultural Credit.

MÖSSNER, K. E. Das deutsche Bodenkreditsystem. Begriffliche Grundlagen theoretisches System. Praktische Probleme und organisatorischer Aufbau des Bankmässig organisierten Bodenkredits in Deutschland. Berlin, Heymann, 1934 XV, 420 p. (Deutscher Bodenkredit, hrsg. von W. Kalveram, Bd. 1).

Insurance.

FEDERAZIONE ENTI MUTUI ASSICURAZIONE INFORTUNI AGRICOLI, ROMA. L'assicurazione infortuni sul lavoro in agricoltura. Osservazioni sulle gestioni del sessennio 1928-1933. Roma, Soc. an. poligrafica italiana, 1934, 75 p.

RAMOTOWSKI, J. Ubezpieczenia gradowe w Polsce. Warszawa, Nakładem « Przewodnika ubezpieczeniowego », 1934. 120 p.
[Hail Insurance in Poland].

Co-operation.

COTTA, F. Agricultural co-operation in fascist Italy with a full account of the general organisation of cooperation. London, King, 1935 XVII, 148 p.

MÜLLER-STOCK, R. Das landwirtschaftliche Genossenschaftswesen im Rhein-Mainischen Wirtschaftsgebiet Berlin & Wien, Spaeth & Linde, 1934. XIV, 197 p. (Veröffentlichungen des Instituts für Genossenschaftswesen an der Johann Wolfgang Goethe-Universität, Frankfurt a. Main. Hft. 7).

Industry.

ENTE NAZIONALE SERICO, MILANO. Annuario serico 1933. Notizie statistiche su la produzione e il commercio dei bozzoli e della seta in Italia e all'estero. Milano, Lanzani Gemelli, 1934. 119 p

EPSTEIN, R. E. Industrial profits in the United States. New York, National bureau of economic research, 1934. XI, 678 p. Publications of the National bureau of economic research, no. 26).

GÉNIN, G. Chimie et technologie du latex de caoutchouc. Paris, Revue générale du caoutchouc, 1934. 392 p.

LELEU, M. Matières alimentaires 3ᵉ éd. Paris, Dunod, 1934 210 p. (Éléments de marchandises, tome 4ᵉ).

MIANOWSKI, H. [ET] L. BERGER. Len w polskiej strukturze gospodarczej. Kraków, Nakładem Towarzystwa ekonomicznego, 1934. VII, 93 p. (Wydawnictwa Towarzystwa ekonomicznego w Krakowie. Tom 73).
[Place of flax in Polish economy].

SALTY, V. Industriewirtschaft der modernen Türkei. Würzburg, K. Triltsch, 1934. VI, 90 p.

Various.

CONDRA, G. E. Geography, agriculture, industries of Nebraska. Lincoln, University publishing cᵒ, 1934, XI, 307 p.

D'ALVISE, P. Principii e precetti di ragioneria per l'amministrazione economica delle aziende. 2ª ed. Padova, « Cedam », 1934. XXIV, 642 p.

GRIBAUDI, P. Geografia generale ed economica ad uso degli Istituti tecnici commerciali. (Programmi 1933). Torino, Società editrice internazionale, [1934]. 4 v.
[v. 1]. Geologia e geografia: le basi geografiche della vita economica. 311 p.
[v. 2]. L'Italia nella sua vita economica, 287 p.
[v. 3]. L'Europa nella sua vita economica. 246 p.
[v. 4]. I paesi extraeuropei nella loro vita economica. 320 p.

SOUTH AMERICAN HANDBOOK 1935. (12th Annual edition). Edited by H. DAVIES. London, Trade and travel publications Ltd., 1935. 650 p. (x-650 p.

TOURING CLUB ITALIANO. Gli stati del mondo: commento geografico-statistico all'Atlante internazionale del T. C. I. Milano, 1934. 1287 p.

[VISINTIN, L.] Calendario-atlante De Agostini 1935. Anno XXXII. Novara, Istituto geografico De Agostini, [1934]. 455 p., 30 maps.

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THE WHEAT POLICY OF FRANCE SINCE 1929

A survey of the French wheat policy since 1929 should be of interest in this Review for a twofold reason:

1. France has attempted in various ways to keep up the price of wheat, and thereby valuable experience has been gained as to the conditions and possibilities of influencing prices and in regard to the effects of such influencing.

2. the nature and the success of the measures taken in France are of the greatest importance; it is these factors that will decide whether France will remain in the future as it has been in the past, a country which on the whole tends to cover its own requirements in wheat, or whether on the other hand it will become an exporting country.

THE WHEAT POLICY DURING THE YEAR 1929-30.

In view of the large proportion of the total area under cereal cropping and of the total area under arable cultivation which is devoted to wheat in France, it is readily intelligible that the price of wheat is of first importance for the economic prosperity of French agriculture.

It was not till after the good harvest of 1929 that any systematic attempt was made to influence the price of wheat in post-war France. Up to that time it had been easy to maintain wheat prices at a sufficiently high level, in view of the considerable import requirements of wheat and other cereals.

The abundant crop of 1929, which, with 90,000,000 quintals on a reduced area of sowings, reached the prewar level, made stricter measures of protection essential. With the law of 1 December 1929 the path already taken by other countries was followed and a minimum percentage milling quota of national wheat was introduced, for flours for breadmaking. This percentage was fixed at 97 per cent. and kept at that level up to the end of the year in question. The provisions as to temporary importation were also made stricter by this same law.

Another measure designed to keep up the wheat market was that of the *raising of the import duty on wheat* from 50 to 80 francs with effect from 20 May 1930. The previous development of the protection policy in respect of wheat is shown on Table III.

Of importance in regard to the future were the law of 30 April 1930 and the Decree of 31 May 1930 on the establishment of permanent wheat depots

and for the encouragement of the erection and utilisation of silos and other grain warehouses. By a Decree of 30 July 1930 provision was made for a reform of the Paris *Bourse de Commerce* with the object of preventing non-professional speculation.

THE WHEAT POLICY IN THE YEARS 1930-31 AND 1931-32.

By means of customs duties and imposition of milling quotas of national wheat it proved practicable for the seasons 1930-31 and 1931-32 to keep up the prices of wheat, more particularly as the less favourable harvests of 1930 and 1931 made necessary considerable imports (see Table I).

With the increased import requirements it was possible to reduce the milling quota of national wheats temporarily without prejudice to the markets on several occasions, *viz.*, down to 70 per cent. towards the end of 1930-31, and to 50 per cent. in May 1932.

As a more far-reaching measure for the protection of the national wheat production there should be mentioned the Decree of 10 November 1931, by which importation was made dependent on import permits. These permits are not transferable and must indicate precisely the quantity and quality of the commodity to be imported.

TABLE I. — *Production of and External Trade in Wheat in France.*

Years 1 August to 31 July	Area 1000 ha.	Yield per ha. quintals	Production 1000 quintals	Wheat: Excess of imports (+) or of exports (—) 1000 quintals	Wheat flour: Excess of imports (+) or of exports (—) 1000 quintals	Total wheat and flour Excess of imports (+) or of exports (—) 1000 quintals (1)
Average 1909/10–1913/14	(2) 6,787	(2) 13.1	(2) 88,627	+ (3) 12,034	— (3) 118	+ (3) 11,877
1924/25	5,512	13.9	76,525	+ 12,016	— 349	+ 12,481
1925/26	5,614	16.0	89,905	+ 7,793	— 231	+ 8,100
1926/27	5,249	12.0	63,077	+ 16,979	— 25	+ 17,012
1927/28	5,237	14.2	75,150	+ 12,670	+ 112	+ 12,819
1928/29	5,243	14.6	76,554	+ 14,281	+ 169	+ 14,506
Average 1924/25–1928/29	5,381	14.2	76,242	+ 12,748	— 65	+ 12,661
1929/30	5,397	17.0	91,786	+ 5,041	— 1,545	+ 2,982
1930/31	5,374	11.6	62,081	+ 20,698	— 3,108	+ 16,553
1931/32	5,196	13.8	71,882	+ 23,700	— 2,042	+ 20,977
1932/33	5,435	16.7	90,771	+ 11,301	— 1,648	+ 9,104
1933/34	5,464	18.0	98,611	+ 6,617	— 1,457	+ 4,674
Average 1929/30–1933/34	5,373	15.5	83,027	+ 13,431	— 1,960	+ 10,818
1934/35	5,305	17.0	90,000	—	—	—

(1) Flour reduced to grain on the basis of 1 quintal of flour = 1·33333. quintal of grain. — (2) Present frontiers. — (3) Former frontiers.

The Wheat Policy in 1932-33

The good harvest of 1932 led to a further stiffening of the wheat policy.

The *milling prescriptions for national wheats* were on 1 August 1932 raised to 85 per cent., on 3 August to 97 per cent., on 2 December 1932 to 99 per cent. and on 25 March 1933 to 100 per cent.

On 12 October 1932 a Decree was promulgated for ensuring the formation and maintenance of a guarantee stock (*stock de sureté*) of wheat in application of the law of 30 April 1930.

By the law of 26 January 1933 considerable funds were made available. The following sums were assigned:

1. 300,000,000 francs for the grant to agricultural credit banks of advances for facilitating the financing of crops;
2. 300,000,000 francs for the formation of a stock of wheat up to 5,000,000 quintals;
3. 30,000,000 francs for warehousing premiums;
4. one million francs for experiments in the use of coloured wheats for feeds.

A number of decrees were promulgated for the carrying out of the law of 26 January 1933. A decree of 9 February 1933 fixed the conditions for the stocking of wheat. A decree of 8 March 1933 included provisions prescribing the formation of a guarantee stock of wheat and fixed the purchase price for the period up to 31 May 1933 at 115 francs per quintal with a weight per hectolitre of 72 kg. In virtue of this regulation it has been possible to warehouse 5,000,000 quintals of wheat up to the end of July 1933.

Further funds were allocated by the law of 14 April 1933. By this law there was granted up to 31 December 1933 a credit of 20,000,000 francs which was to be used for granting premiums on the utilisation of national wheat for purposes other than human food and manufacture of alcohol.

With a view to restriction of imports, the wheat import agreed from Hungary was, on 9 May 1933, transformed into a maize quota of 400,000 quintals, with repayment of 40 per cent. of the minimum customs duty on such imports effected between 9 May and 30 September.

Other measures referred to the secondary cereals. By a decree of 16 September 1932 the duties on oats, rye and maize and their derivatives were raised. The rates of the general tariff were fixed for whole oats, rye and maize at 80 francs and those of the minimum tariff at 40 francs per 100 kg. The "small grain" maize intended for poultry and stock feed is admitted to importation with the advantage of a 40 per cent. reduction of duty within the limit of a quota; maize intended for the starch and glucose industries is admitted to importation at a 35 per cent. reduction of duty under certain conditions.

With the object of still further restricting imports from other countries quotas were fixed by a Decree and Ordinance of 16 September 1932 for barleys and brans, and by Decree and Ordinance of 8 March 1933 also for maize.

The Wheat Policy for the years 1933-34 and 1934-35 up to the publication of the Law of 24 December 1934.

By the measures enumerated above, equilibrium on the wheat market was ensured up to about the second quarter of 1933. Subsequently this equilibrium was increasingly disturbed since the harvest of 1933 promised also to be favourable, and in consequence the disposal of the large existing stocks became very difficult. When, in the middle of June 1933, wheat prices fell to 84 francs, the fresh regulation of the wheat market became an increasingly urgent question. This new regulation was effected by means of the law of 10 July 1933.

By the law of 10 July 1933 a fundamental change was introduced into the wheat policy by means of the *legal minimum prices*. The minimum price for wheat of commercial quality of a specific weight at least equal to 76 kg. the hectolitre was at first 115 francs the quintal and subsequently was increased on the first of each month by 1.50 francs, the last increase being made on 1 July 1934. The validity of the minimum prices extended over the period from 15 July 1933 to 15 July 1934.

In addition to the suspension for two months of the import of soft wheats, the law contained the following measures for the organisation and relief of the congestion of the wheat market:

1. the constitution of wheat stocks intended for sale by lots and the carry-over of surpluses to the following season:
2. the institution of denaturation premiums for encouraging the utilisation of national wheats and low grade flours for purposes other than human food and the manufacture of alcohol;
3. the institution of export premiums;
4. the lowering of the rate of extraction in the manufacture of breadstuff flours.

The business of formation of stocks for sales in lots and of the carry-over of surpluses to the following season was entrusted to the agricultural co-operative societies and (after the enactment of the law of 17 March 1934) also to the dealers and manufacturers. As stockage indemnity, a premium of from 3 to 5 francs per annum and per quintal was at first granted. By the law of 17 March 1934 the Government guaranteed a price of 131.50 francs per quintal to compensate for the abolition of the premium. In 1933-34 some 19,000,000 quintals profited by the foregoing provisions.

In order to encourage the sale of the quantities of wheat in stock and carry-over it was ordered that in the preparation of breadstuff flours the millers should use a fixed percentage of this wheat. For distances of more than 50 km. mills were granted a transport indemnity for the carriage of wheats held in stock or as carry-over. The percentage of these wheats which had to be utilised was:

from 1 January	1934	. . . .	20 per cent.	
» 1 February	»	. . . .	25 »	»
» 1 May	»	. . . .	35 »	»
» 1 July	»	. . . .	50 »	»
» 1 August	»	. . . .	65 »	»

Conditions for the denaturation of wheat were published by a Decree of 5 August 1934. The premium which must not exceed the existing difference between the official prices of wheat and the prices of the other cereals, was at first fixed at 50 francs. About 5,000,000 quintals were treated in the farming season 1933.

The export premium was paid under the form of a reimbursement of the customs duty of 80 francs per quintal of national wheat exported (Decree of 22 September 1933). This measure was justified in regard to other countries by declaring that the export was merely re-export of the quantities undoubtedly too high which had been imported during the preceding years. In spite of the reimbursement of the customs duty, export business was not at first brisk, because the difference between the premium and the legal price within the country was soon higher than the price that could be obtained by making the export. The law of 28 December 1933 provided in consequence that, by exception to Art. 20 of the Law of 10 July 1933, the Minister of Agriculture should fix, on the proposal of the *Comité national du blé* the amount of the reimbursement assigned per quintal. From 15 June 1934 this sum is fixed at 90 francs.

The rate of extraction was established at 65 per cent. by Decree of 6 September 1933.

In order to ensure the collaboration of all concerned there was formed, in accordance with the law of 10 July 1933, the *Comité national de défense et d'organisation du marché du blé*, consisting of representatives of agriculture, consumers, milling and trade. This Committee was to act as advisory body to the Ministry of Agriculture. *Departmental Committees* of similar type were constituted in the prefectures.

Mention may be made of other measures taken in 1933-34, *viz.*, the transformation of the wheat quota assigned to Yugoslavia into a maize quota of 240,000 quintals arranged on the same conditions as that for Hungary (Decree of 15 July 1933); the authorisation given to the *Caisse de crédit agricole* to make advances up to 50,000,000 francs (Decree of 6 August 1933); the reintroduction of the compulsory utilisation of wheat of the 1932 harvest for the manufacture of flours for breadmaking at a percentage of 35 per cent. (Decree of 18 August 1933); the foreign import quota of oats, rye, buckweat, durra, millet and canary grass (Decree of 26 August 1933); the increase up to 110,000,000 francs of the loans to be made in virtue of the Decree of 6 August 1933 (Decree of 11 September 1933).

As already stated, *two supplementary laws* were enacted for the purpose of rendering more effective under existing condition the original law on wheat, *i. e.*, the laws of 28 December 1933 and of 17 March 1934

TABLE II. — *Prices of Wheat at Paris in francs per metric quintal (national wheat 75-77 kg per hectolitre)* (1)

Month	1927 28	1928 29	1929 30	1930 31	1931 32	1932 33	1933 34	1934 35
August	163 06	153 15	148 30	168 06	162 45	124 35	119 00	111 00
September	154 91	152 75	147 21	171 56	166 30	117 25	120 00	111 00
October	151 44	155 69	145 44	168 80	162 45	114 70	121 00	111 00
November	148 16	154 30	142 65	164,75	161 50	112 80	122 00	112 00
December	155 33	152 06	139 94	167 12	163 65	111 75	123 00	(2) 104 75
January	156 22	154 44	137 00	173 10	167 45	109 10	124 50	(2) 77 75
February	155 56	158 06	129 50	176 75	171 60	107 35	126 00	(2) 80 50
March	162 45	160 55	133 20	181 25	173 20	99 75	127 50	
April	171 37	155 50	132 37	185 95	170 10	99 00	129 00	
May	179 87	154 05	127 70	185 60	175 25	97 55	130 50	
June	176 95	153 94	133 50	188 10	170 50	96 15	132 00	
July	166 62	159 25	155 87	168 80	160 45	112 10	133 50	
Yearly Averages	161 98	155 35	139 42	175 00	167 1	107.2	125 65	

(1) According to the *Monthly Crop Report and Agricultural Statistics* of the International Institute of Agriculture

(2) Average prices for the 1934 crop

The law of 28 December 1933 introduced the collection, on the price of each quintal entering the mill, of a tax of 3 francs charged on the grower The law also contained some important prohibitions. It prohibited the sale, or the offer or use for breadmaking, of panifiable flours, at a price not corresponding to the legal price of wheat which will be fixed in each department by the Prefect in the conditions prescribed by the law of 31 August 1924. In order to prevent an extension of the area under wheat cultivation, the law further forbade the growing of wheat on land which had already carried wheat in the previous year and also the sowing of spring wheats in 1934 on lands other than those on which it had been intended to sow winter wheat, in accordance with the normal crop rotation. Any infringement of these prescriptions will be punished by a fine of 500 francs per hectare thus sown.

The law of 17 March 1934 imposed on farmers the duty of returning the areas under wheat cultivation and the wheat stocks held by them at a given moment.

Table III. — *Wheat Import Duties in France.*

(francs per quintal)

From 1861 to 1881	0.50	From 16 October 1915	7.00
» 1881 to 1885	0.50	» 1 July 1921	14.00
» 28 March 1885	3 00	» 10 January 1924	7 00
» 29 March 1887	5 00	» 1 August 1924	14 00
1 July 1891	3 00	» 1 August 1926	18.20
» 1 July 1892	5 00	» 2 September 1927	25 00
» 27 February 1894	7 00	» 18 November 1927	35 00
» 4 May 1898	7 00	» 23 May 1929	50 00
» 1 July 1898	7 00	» 20 May 1930	80 00
31 July 1914	exempt		

Table IV. — *Maximum Quantity of Foreign Soft Wheats which may be incorporated in Flours for Consumption as Food.*

Decree of		Decree of	
2 December 1929	3 per cent	14 March 1932	30 per cent.
26 July 1930	10 » »	19 March 1932	35 »
11 April 1931	15 » »	20 March 1932	40 »
15 April 1931	20 » »	1 April 1932	45 »
27 April 1931	25 » »	6 May 1932	40 » »
16 June 1931	30 » »	24 May 1932	45 » »
30 June 1931	25 » »	27 May 1932	50 » »
3 July 1931	20 »	16 June 1932	45 » »
9 July 1931	15 » »	23 June 1932	40 » »
24 July 1931	10 » »	30 June 1932	35 » »
24 November 1931	3 » »	2 July 1932	25 » »
30 January 1932	10 » »	1 August 1932	15 » »
9 February 1932	15 » »	3 August 1932	3 » »
12 February 1932	20 » »	2 December 1932	1 » »
24 February 1932	25 » »	25 March 1933	0 » »

In order meet *the expenditure on the wheat policy*, a progressive milling tax was introduced by the law of 10 July 1933 and a tax on production by the law of 28 December 1933. In addition, certain other receipts have been earmarked for this purpose coming from customs duties and fines paid for infringements of the laws on wheat. As the funds from these sources were not immediately available, and as the co-operative societies could not indefinitely undertake the financing of the crops from their own funds, a sum of 100,000,000 francs was allocated by the law of 28 February 1934 which the State could place as loans at the disposal of the *Caisse national de crédit agricole* for the protection of the wheat market. By *the law of 4 July 1934*, this sum was raised to 300,000,000 francs. These credits were completely utilised.

The regulation introduced by the law of 10 July 1933 was extended to the harvest of 1934 by the *law of 9 July 1934*, although with certain modifications. In accordance with this new law it was the Minister of Agriculture who established the fixed prices and determined the period of their application. The total of the advances which might be placed by the State at the disposal of the *Caisse nationale de crédit agricole* for the protection of the wheat market was raised to 500,000,000 francs. The new minimum prices were fixed by an Ordinance of 13 July 1934. For the period up to 31 October 1934 a price of 108 francs per quintal was established for the wheat of the new crop; this price was later to rise gradually up to 118 francs for the period from 1 June to 15 July 1935. The corresponding prices of the three Algerian departments were from 104 to 114 francs. For the wheat carry-over of the crop of 1933 the price of 131.5 francs established previously remained in force.

By a decree of 10 July 1934 it is prescribed that a *minimum percentage of wheat of the 1933 crop* must be employed in the manufacture of flours for bread-making. From 1 August 1934 the percentage was 65.

For the denaturation of wheat of the 1933 crop a premium of 48 francs per quintal was later granted (Decree of 26 September 1934).

By Decree of 30 July 1934 the *maximum quantity of panifiable flour that the millers might extract from one quintal of wheat*, whatever the specific weight of the wheat, was fixed again at 65 kg.

The wheat policy inaugurated by the law of 10 July 1933 undoubtedly prevented a complete break-down on the wheat market. Apart from the measures just described, prices would have fallen to an incredibly low level. This is immediately clear from an inspection of the figures contained in the annexed tables. These may be further supplemented by some figures relating to the stocks existing at the end of the two last farming seasons. A short time after the harvest of 1933, the Ministry of Agriculture estimated the available stocks of wheat at 107,000,000 quintals (stocks on 1 August 1933, 12,000,000; yield of harvests in France, 93,000,000, in North Africa 2,000,000 quintals), and the requirements at about 94,500,000 quintals (for food purposes, 84,500,000 quintals; seed wheat 10,000,000 quintals). It soon appeared however that the 1933 harvest was larger by some 6,000,000 quintals, and that, in consequence, there was a much larger surplus. From private sources, stocks from the harvest of 1932 were declared to be considerably higher. In the year 1933-34 stocks

continued to accumulate and at the end of 1933-34, were estimated as being from 20 to 30,000,000 quintals.

The measures thus taken to meet the situation that had arisen on the wheat market were characterised by the fact that many of the measures had reference to the moment only, that it was impossible to control their application or their observance, and that there was an absence of the necessary co-ordination of the measures among themselves and with the rest of agrarian policy.

That the isolated wheat policy has further increased the difficulties may undoubtedly be admitted. The good wheat harvests of recent years were certainly not due solely to good weather conditions. The maintenance of wheat prices accompanied by, at the same time, an intensification of the crisis on nearly all the agricultural markets, has resulted not only in a particularly careful cultivation of the area under wheat, but also here and there in an extension of areas under wheat. Wheat growing was, in any case, much more remunerative than that of the other cereals, in respect of which, as of rice, there was a considerable excess of imports. Some measures directed towards the protection of the wheat market, such as the policy of denaturation of wheat, had an unfavourable effect on the other cereals.

During last year it has proved possible to reduce considerably the imports of the other cereals. But at the present time the possibility of a larger restriction of imports is still only very slight, in view of the extent to which the colonies enter as importers of cereals. Some valuable data have been obtained for judging of this question by following the price movement of the secondary cereals as compared with wheat. Prices in francs per quintal in Paris were as follows:

Years	Wheat	Oats	Brewing barley	Rye
1928-29	155.35	127.85	133.4	-
1931-32	167.1	101.75	95.15	98.25
1933-34	125.65	48.00	77.85	71.75

TABLE V. — *Excess of Imports (+) or of Exports (—) of Cereals in France*

(thousand quintals)

Years	Wheat	Wheat flour	Rye	Barley	Oats	Maize	Rice rough	Rice milled
Average :								
1925/29 . .	+ 12,531	+ 8	+ 320	+ 370	+ 893	+ 6,744	+ 325	+ 1,448
1930	+ 5,895	— 2,018	+ 224	+ 1,408	+ 650	+ 8,085	+ 396	+ 1,334
1931	+ 23,645	3,385	+ 766	+ 4,204	+ 819	+ 10,615	+ 376	+ 2,274
1932	+ 21,200	1,308	+ 500	+ 4,453	+ 1,569	+ 11,699	+ 361	+ 3,025
1933	+ 7,796	1,772	+ 115	+ 2,415	+ 232	+ 7,201	+ 346	+ 4,994
1934	+ 3,601	— 1,371	+ 20	+ 1,500	+ 46	+ 6,750	+ 367	+ 5,760

By two decrees of 15 June 1934 the importation of rice, with the exception of rice coming from Indo-China, was made subject to quota-fixing. This measure has however not been put into force, as the two decrees were cancelled by two others of 19 July 1934.

REGULATION OF THE WHEAT MARKET BY THE LAW OF 24 DECEMBER 1934.

The course of events which has just been outlined made increasingly necessary a change in the measures previously taken, which had clearly proved to be inappropriate or at least inadequate for ensuring sound market conditions. It was in this way that the *law of 24 December 1934* come to be passed.

The chief modifications introduced by this law are that the minimum prices and the regulation of the rate of flour extraction are abolished, and the growers making bread on their own farm may have their grain milled without the obligation of admixture of wheat of the carry-over stocks.

The law is divided into three sections:

I. Permanent measures for regulation of the wheat market;

II. Absorption of surpluses;

III. Temporary measures and adaptation of the Codification Decree of 6 October 1934.

Under section I (*permanent measures of market regulation*) the sowing in wheat is prohibited on areas larger than those assigned by local custom to rotation cropping, as also any extension of the areas sown to wheat in relation to the average of the two, and after 1935, of the three previous years. The prohibition also extends to the cultivation of wheat on land which carried this crop in the previous year, except in regions where this practice is traditional and with reserve of an area of one hectare for family food supply. The Government may in addition revise and curtail the list of varieties of wheat with a view to checking the use of high yielding varieties the flour from which is of poor baking quality.

For statistical purposes all growers are required to make each year to the mayor's office before 1 April declarations in respect of cultivable lands, lands sown to wheat, and quantities of wheat harvested in the previous year. The declarations will be posted.

In regard to *absorption of surpluses*, the Minister of Agriculture is empowered to reabsorb the surplus of wheat stocks by the following means:

(1) direct purchases for the formation of a guarantee stock;
(2) denaturation of the grain;
(3) exportation of wheat for breadmaking and for feed.

Purchasing operations are to be carried out directly, one half on the wheat held in stocks by the co-operative societies and the remainder by direct purchases of other wheats from the grower. From 1 July 1935, the Minister of Agri-

culture will in addition take over the wheat stocks of the 1933 and 1934 wheat crops, still existing at that date, at the average price of the first six months of 1935 on the open market of Paris.

With the object of increasing the bread consumption by means of a price reduction, the Departmental Committees will proceed to a revision of the milling and baking margins within a period of one month dating from the publication of the present law.

The *third section of the law* confers on the Council of Ministers the power of re-establishing by decree a minimum price. A fixed price exists only for the wheat carry-over of 1933 and the wheat stocks of 1934. The rate is 131.50 fr. for the carry-over and 97 fr. for the stocks. Co-operative societies will receive for the half of the wheat stocks held by them a premium of 11 fr. per quintal.

So long as these temporary measures remain in force there will also be in force the regulations issued previously for their execution. Thus, for example, the Minister of Agriculture is empowered to fix by decree the maximum price for baking flour for the different departments. In addition there may be fixed a minimum quantity of national stock wheat for obligatory milling. The grower, however, who makes his own bread on the farm may have his wheat ground without the obligation of an admixture of carry-over wheat.

The *general expenditure on the interventions* has been estimated at 1,500,000,000 francs. The funds to be raised by means of credit are not to be a burden on State resources but are to be amortised by means of special taxes in the course of 10 years. The two most important sources of revenue for the amortisation of the credits are: —

(1) the progressive milling tax on the quantity milled (1.5 to 5 fr. per quintal);

(2) the tax of 4 fr. per quintal paid by the wheat growers (formerly 3 francs) on the quantities of wheat milled for the manufacture of flours intended for human consumption.

In addition various receipts from import charges and from fines for infringement of legal prescriptions are assigned to the same purpose. By a decree of 24 December 1934 the quantities of wheat intended for consumption in the grower's family have been exempted from the tax on production.

For the execution of the law of 24 December 1934 various decrees have been issued. By a decree of 28 December 1934 *a 45 per cent. admixture of the wheat carry-over and a 15 per cent. admixture of the national wheat stocks of 1934* has been imposed on the milling trade; the application of the latter provision has been postponed by decree of 7 January 1935 to 16 February 1935.

For the constitution of a guarantee stock and the purchase of freely offered wheat mainly held by the small farmers, the Government has placed itself in touch with more than one million growers who will be expected to supply 3,000,000 quintals. An equal quantity will be purchased from the co-operative societies that hold stocks. These purchases were initiated at the beginning of February 1935.

The *use of denaturated wheat as stock feed* was facilitated by the unfavourable result of the oats harvest. The denaturation premiun was at first fixed, from 31 December 1934, at 45 fr. and, as the price of oats fell in consequence, later at 40 fr. (for the applications dating from 8 January 1935). It is hoped by denaturation to direct several million quintals toward the feeding of stock. During the month of January more than 2,000 applications for denaturation of wheat relating to more than 3,500,000 quintals have been addressed to the Ministry of Agriculture.

Exports of wheat are made within the limits of the Budapest agreements. From the beginning of the season up to the end of the month of January, it was possible thus to export 4,500,000 quintals. For exportation, a reimbursement of 70 frs. per quintal has been allowed. In all an export of 3,000,000 quintals of breadstuff wheat and 6,500,000 quintals of denaturated wheat is reckoned as probable.

H. Böker.

IMPORTANCE OF FARM ACCOUNTANCY FOR THE STUDY OF CERTAIN ECONOMIC PROBLEMS IN AGRICULTURE (*concluded*)

THE RELATIVE ADVANTAGE OF A BRANCH OF FARMING IN COUNTRIES WHERE DIFFERENT TYPES OF FARMING PREVAIL

It would not be practicable to make a scientific distribution of the net return among the different branches of farming; but, as it appears essential to form a precise idea of the importance of each crop, etc., there is sound reason for making the distribution of the net return in proportion to the importance of each branch of production. We shall thus obtain, with the reserve only of the extent of this proportion, the amount remaining to the grower after proportional distribution of the farming costs among the different branches of production. For convenience of expression we shall, although improperly, retain for these results the term " net returns. " We shall thus assign, to each branch of production, the " net return " which falls to it according to its relative importance.

It is proposed to follow, over a certain number of years, the variations which have occurred in the net return of a certain size class, or of a certain region.

It will now be possible to know if any branch of production has given a " net return " larger or smaller than that of the previous year; to calculate the increase or diminution of the " net return " of each branch of production. Since there is no difficulty in ascertaining the increase or the diminution of the gross yield of each branch of production, there is nothing to prevent the calculation *by difference* of the increase from one year to another or the diminution

of the farming costs of each branch (1). It can, if desired, be ascertained if this increase or diminution is to be referred to the labour costs or to the other costs, such as seed, feeding stuffs, fertilisers, etc.

Thus all the factors are available enabling us to see what is the relative advantage (in the organic whole formed by the farm) of a given crop or branch of production. The tables on pp. 110-111 provide examples, and summarised results are shown in the statement below and in that on p. 112.

The highest " net returns."

Pig fattening	Dairy production	Stock breeding and arable farming
In 1928-29		
Farms of less than 10 ha.	Farms of 10 to 20 ha.	Farms of more than 100 ha.
» of 20 to 30 ha.	» of 50 to 100 ha	
» of 30 to 50 ha.		
In 1929-30		
Farms of less than 10 ha.		Farms of more than 100 ha.
» of 10 to 20 ha.		
» of 20 to 30 ha		
of 30 to 50 ha.		
of 50 to 100 ha		
In 1930-31		
Farms of more than 100 ha	Farms of less than 10 ha.	
	of 10 to 20 ha.	
	» of 20 to 30 ha	
	» of 30 to 50 ha.	

The " Net Returns " diminish as the area of the farm increase. An exception is constituted in 1928-29 by the farms of 20 to 30 ha. which stand above those the area of which is between 10 and 20 ha. because the pig fattening on the former was much more profitable than on the latter. In 1929-30, however, the farms of 20 to 30 ha. fall behind those of 10 to 20 ha. because the gross return from the dairy production of the farms of 20 to 30 ha. diminished

(1) The crops and the transformation activities on a farm are merely the organic parts of the farm, closely interlinked, so that it is impossible to separate, speaking from the economic standpoint, the results of any.

It is in the synthesis of all the separate accounts that is found the single figure which has an absolute and indisputable value: that which relates to the aggregate. On a farm the earning capacity of one branch affects that of another—it is an indivisible whole; and it is entirely logical to distribute, as proposed here, the net return, or the profit or loss on total farm assets over the different branches of production proportionally to the importance of each of these. We have at the same time distributed in the same way the farming costs or the cost of production, and we can call the results thus obtained the "farming costs" or "cost of production" of each of the farm products, always taking into account the approximate character of these terms.

	Net return in gold francs per ha.				Of the gross return in	
	Pigs	Milk and milk products	Other products	Total	Pigs	Milk and milk products
DENMARK:						
Farms engaged in pig fattening and in dairying:						
1928-29: farms of: (a) less than 10 ha. .	105.14	105.59	65.17	275.90	—	—
(b) from 20 to 30 ha. .	78.56	82.47	53.86	214.89	—	—
(c) from 10 to 20 ha. .	77.52	75.34	48.17	201.03	—	—
(d) from 30 to 50 ha. .	70.06	72.30	45.29	188.55	—	—
(e) from 50 to 100 ha. .	63.34	62.26	50.47	176.07	—	—
(f) over 100 ha	60.19	32.67	74.90	167.76	—	—
1929-30: farms of: (a) less than 10 ha. .	107.44	114.20	69.53	291.17	+ 31.74	+ 5.59
(c) from 10 to 20 ha. .	75.51	81.58	45.34	202.43	0.90	+ 43.01
(b) from 20 to 30 ha. .	68 - -	74.52	44.66	187.18	— 25.22	+ 2.80
(d) from 30 to 50 ha. .	58.30	60.79	34.81	153.90	— 18.00	— 9.68
(e) from 50 to 100 ha. .	47.56	48.47	34.30	130.33	— 19.39	— 8.30
(f) over 100 ha, ...	40.64	25.99	42.90	109.53	— 13.85	+ 18.04
1930-31: farms of: (a) less than 10 ha, .	19.46	17.49	12.75	49.70	—134.01	—192.00
(c) from 10 to 20 ha. .	11.28	9.26	7.07	27.61	— 88.94	—141.34
(b) from 20 to 30 ha. .	7.69	6.87	4.77	19.33	— 80.44	—137.14
(d) from 30 to 50 ha. .	1.19	0.98	0.59	2.76	— 78.93	—138.33
(e) from 50 to 100 ha. .	0	0	0	0	— 69.02	—109.03
(f) over 100 ha, ...	— 1.09	— 0.52	— 1.15	— 2.76	— 56.43	— 47.59

Increase (+) or decrease (—) as compared with 1928-29

gold francs per ha.		of farming costs in gold francs per ha.				of "net return" in gold fr. per ha.			
Other products	Total	Pigs	Milk and milk products	Other products	Total	Pigs	Milk and milk products	Other products	Total
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
— 66.32	— 28.90	+ 29.44	— 3.02	— 70.68	— 44.26	+ 2.30	+ 8.61	+ 4.36	+ 15.27
— 13.84	+ 22.27	— 4.89	+ 36.77	— 11.01	+ 20.87	— 2.01	+ 6.24	— 2.83	+ 1.40
— 12.16	— 34.58	— 14.66	+ 9.75	— 1.96	— 6.87	— 10.56	— 7.95	— 9.20	— 27.71
— 27.71	— 55.39	5.34	+ 1.83	— 17.23	— 20.74	— 12.66	— 11.51	— 10.48	— 34.65
— 38.79	— 66.48	— 3.61	+ 5.49	— 22.62	— 20.74	— 15.78	— 13.70	— 16.17	— 45.74
— 67.92	— 63.73	— 5.70	+ 24.72	— 35.92	+ 5.50	— 19.55	— 6.68	— 32.00	— 58.23
— 65.28	— 391.29	— 48.33	103.90	— 12.86	— 165.09	— 85.68	— 88.10	— 52.42	— 226.20
— 53.67	— 283.95	— 22.70	— 75.26	— 12.57	110.53	— 66.24	— 66.08	— 41.10	— 173.42
73.00	— 290.58	— 9.57	— 61.54	— 23.91	— 95.02	— 70.87	— 75.60	— 49.09	— 195.56
57.65	— 274.91	— 9.16	— 67.01	— 12.95	— 89.12	— 69.77	— 71.32	— 44.70	— 185.79
81.16	— 259.21	— 5.68	— 46.77	— 30.69	— 83.14	— 63.34	— 62.26	— 50.47	— 176.07
118.85	— 222.87	+ 4.85	— 14.40	— 42.80	— 52.35	— 61.28	— 33.19	— 76.05	— 170.52

	"Net Return" in gold fr. per ha.				of the gross return	
	Sugarbeet	Cereals	Other branches	Total	Sugarbeet	Cereals
GERMANY:						
Farms growing sugar beet.						
1928-29. (*a*) West and South 5 to 20 ha	*23.16*	34.57	94.17	151.90	—	—
(*b*) East . . . . . 5 to 50 ha.	*23.42*	30.04	94.73	148.19	—	—
(*c*) West and South 20 to 100 ha.	*18.81*	32.40	55.00	106.21	—	—
(*d*) . . . . more than 100 ha.	*19.79*	35.91	43.10	98.80	—	—
(*e*) East . . . . 50 to 200 ha	*16.08*	26.00	39.34	81.51	—	—
(*f*) . . . . more than 200 ha.	*9.74*	18.14	23.99	51.87		—
1929-30 (*e*) East . . . . 50 to 200 ha.	*21.55*	20.13	39.71	90.39	+ 32.63	0.54
(*b*) . . . . . . 5 to 50 ha.	*14.89*	16.08	49.51	80.48	+ 11.52	16.86
(*a*) West and South 5 to 20 ha	*9.44*	17.10	44.04	70.58	12.00	— 1.89
(*d*) . . . . more than 100 ha.	*11.91*	19,25	23.33	54.49	+ 0.52	— 42.38
(*c*) . . . . . 20 to 100 ha	*9.88*	14.18	29.18	53.24	— 9.45	— 62.35
(*f*) East . . . more than 200 ha.	*10.23*	15.24	17.87	43.34	+ 27.63	— 14.14
1930-31 (*a*) West and South 5 to 20 ha	*21.48*	39.34	74.29	135.11	— 15.54	+ 19.68
(*c*) . . . . 20 to 100 ha	*19.78*	33.73	44.75	98.26	4.64	— 10.22
(*b*) East . . . . . 5 to 50 ha.	*11.24*	16.36	42.41	70.01	— 21.64	— 8.35
(*e*) . . . . 50 to 200 ha.	*11.90*	19.75	24.85	56.50	— 11.94	— 16.18
(*d*) West and South more than 100 ha.	*12.27*	22.54	21.69	56.50	— 19.50	— 31.43
(*f*) East . . . . . more than 200 ha.	*3.16*	6.28	6.53	15.97	— 19.22	— 14.99

Increase (+) and decrease (—) as compared with 1928-29

(in gold francs per ha.)		net return (in gold francs per ha.)				farming costs (in gold francs per ha.)			
Other branches	Total	Sugarbeet	Cereals	Other branches	Total	Sugarbeet	Cereals	Other branches	Total
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
— 39.80	— 7.71	+ *27.16*	— *3.58*	— *40.17*	— *16.59*	+ 5.47	+ 3.04	+ 0.37	+ 8.88
— 61.65	— 66.99	+ *20.05*	— *2.90*	— *16.43*	+ *0.72*	— 8.53	— 13.96	— 45.22	— 67.71
— 46.69	— 60.58	+ *1.72*	+ *15.58*	+ *3.44*	+ *20.74*	— 13.72	— 17.47	— 50.13	— 81.32
45.91	— 87.77	+ *8.40*	— *25.72*	— *26.14*	— *43.46*	— 7.88	— 16.66	— 19.77	— 44.31
— 20.94	— 92.74	+ *0.48*	— *44.13*	+ *3.88*	— *39.77*	— 9.93	— 18.22	— 24.82	— 52.97
— 57.24	— 43.75	+ *27.14*	— *11.24*	— *51.12*	— *35.22*	+ 0.49	— 2.90	— 6.12	— 8.53
—144.51	— 140.37	— *13.86*	+ *14.91*	— *124.63*	— *123.58*	— 1.68	+ 4.77	— 19.88	— 16.79
— 126.83	— 141.69	— *5.61*	— *11.55*	— *116.58*	— *133.74*	+ 0.97	+ 1.33	— 10.25	— 7.95
118.54	— 148.53	— *9.46*	+ *5.33*	— *66.22*	— *70.35*	— 12.18	— 13.68	— 52.32	— 78.18
— 85.70	— 113.82	— *7.76*	— *9.84*	— *71.21*	— *88.81*	— 4.18	— 6.34	— 14.49	— 25.01
115.36	— 166.29	— *11.98*	— *18.06*	— *93.95*	— *123.99*	— 7.52	— 13.37	— 21.41	— 42.30
97.77	— 131.98	— *12.64*	— *3.13*	— *80.31*	— *96.08*	— 6.58	— 11.86	— 17.46	— 35.90

We see that in 1929-30 the increase occurs in the labour costs and especially in the miscellaneous expenses, but that the decrease in expenditure on stock feeds is considerable enough to lower the total farming costs, except for the farms of from 10 to 20 hectares where the farming costs increase.

In 1930-31 the labour costs show an increase as compared with those of 1928-29 only on the farms of more than 100 ha.; as compared with the 1929-1930 costs there is a slight decrease. The other costs are somewhat lower than those of 1928-29, but the expenditure on stock feeds is much lower, and it is this decrease which accounts for the marked decrease in farming costs already noted, a decrease which is very largely connected with the pig fattening.

In 1928-29, the small farms of the West and of the East of Germany have been more remunerative than the large farms. Then come the medium-sized and large farms of the West and in the last place the medium-sized and large farms of the East. In proportion as the area increases, a decrease in the total net return is noted, as also in the net return of the sugar beet cultivation, that of cereal growing and of the other branches. The net return on sugar beet growing is about one sixth of the total net yield. It will be found that this proportion remains unchanged during the three years under review.

In 1929-30 it is the farms of from 50 to 200 hectares of the East which stand first; they succeeded in improving all their net returns, especially the net return on sugar beet growing. In 1930-31 it is found that these farms do not maintain their leading place but fall back into the fourth place. The farms of from 5 to 20 and from 20 to 100 ha. of the West show a marked advance and take the first and second place. *In this way the small family farms and the medium-sized farms of the West and South come out first: then follow the family farms and the medium-sized farms of the East: then, the large farms of the West and finally the large farms of the East. This is practically a return to the situation of 1928-29.*

From 1928 to 1929, the farms of the East of Germany succeeded in increasing by as much as from 10 to 33 gold francs the gross return on sugar beet growing, but to do so they had to increase farming costs; the net return however on sugar beet growing was a little higher than that obtained, for the same branch of farming, on the farms of the West and South, which scarcely increased or did not at all increase expenditure in connection with sugar beet growing. It was only the farms of more than 100 ha. which, among the farms of the West, increased by 8 gold francs the cultivation costs of sugar beet; the gross return of this branch increased only by 0.52 gold francs per ha. and these farms were in almost as unfavourable a position as the two other groups of farms of the West and South.

In 1930-31 the farms of 5 to 20 ha. and of 20 to 100 ha. of the West made an advance; the former were able to effect an increase as compared with 1928-29 in the gross return of cereal growing and to decrease the farming costs of sugar beet and especially the costs of stock farming; the improved position of the latter is due to the fact that the decrease in the gross return from sugar beet is only half that of 1929-30, that the farming costs of this crop decrease to the same extent and that the gross return from cereal growing is much better

than in 1929-30. The farms of the East take a lower place because the gross return on sugar beet, which had increased in 1929-30, was considerably lower in 1930-31, while costs did not diminish in the same proportion.

The farms of more than 100 hectares of the West and South remain at the same level as in 1929-30.

From 1928-29 to 1930-31, the profit capacity of sugar beet and of cereals has thus been more stable in the West and South than in the East of Germany. Farms of 5 to 20 and 20 to 100 ha. in the West and South improved in 1930-1931 the earning capacity of the live stock farming; in the East, the position of stock farming became more precarious.

This enquiry has not been pursued further, the object being to show that results of great interest may be obtained from our figures which will not be found otherwise. On the other hand, *in order make a complete enquiry, and to base conclusions on thoroughly solid bases, it would be essential to possess accountancy results extending over more than a three year period, in fact over five to ten years at least.*

JOSEPH DESLARZES.

AGRICULTURAL CO-OPERATION IN AUSTRIA (*Concluded*).

§ 9. CO-OPERATIVE MARKETING SOCIETIES FOR PURCHASE AND SALE.

In the course of the development of co-operation in Austria, there has been a gradual abandonment of the principle of forming general co-operative societies embracing all the manifold activities of farming. Although the administrative expenses of co-operative societies are more easily met by societies of a comprehensive character and although, on the other hand, it is difficult to find in the country an adequate number of expert co-operators, the tendency to differentiation in agricultural co-operation is gaining ground all the time. Hence while for the Raiffeisen banks the trade in agricultural products plays a subordinate part and for the dairy and stock farming societies it is limited mainly to the products handled by these societies, joint trade transactions are carried out in the first place by co-operative marketing societies for purchase and sale.

According to their rules, the economic task of these societies is defined as follows: the object of the society is to purchase commodities required on the farms of members, especially the actual farming requisites, machines, implements, seeds, fertilisers, etc., and to assign them to members against an equivalent; to transform and to sell on commission, and at the cost of its members, their agricultural products, such as cereals, hay, potatoes, etc. These societies endeavour to obtain the best prices for the commodities sold, and in respect of the commodities purchased a guarantee of quality and reasonable prices. The society buys the members' products at fixed prices, but if the resale is effected under favourable conditions, a supplementary payment is made to the grower.

Every member is expected to hold at the disposal of the society and to consign to it, in accordance with the quantities and qualities laid down in the rules, and at the proper time and unadulterated in any way, the products which in virtue of a special agreement are to be delivered by him to the society for storage, transformation or sale. The principle of payment on account to the members must be strictly observed by the co-operative society.

With a view to securing a greater degree of economic effectiveness on the market, these co-operative societies have been grouped into central marketing associations, such as the Lower Austrian Federation of Agricultural Co-operative Societies which is by far the most important; the Styrian Farmers' Union; the Vorarlberg Federation of Agricultural Co-operative Societies, and the similar Federations of the Tyrol, Carinthia and Burgenland. In Upper Austria, the co-operative societies for purchase and sale are affiliated to the Agency for trade in agricultural commodities attached to the *Landeskulturrat* of Upper Austria, while at Salzburg the sole organisation is the Farm Marketing Office of the Salzburg *Landeskulturrat* with no co-operative societies attached. The idea seems to be gaining ground by degrees of the future formation of a single central co-operative organisation over the whole country for co-operative purchase and sale, as has already been done for co-operative finance.

At the end of last century the first co-operative grain warehouses in Austria were founded; at the present time they form the most important link in the whole organisation for the marketing of cereals. The co-operative grain warehouses form the connecting link between the farmer, who is partly the grower (or seller) and partly the consumer (buyer), and the Federation in its role of purchaser of farm requisites and seller of farm products. These organisations have the twofold function of storehouses and distributing centres. The larger number of these are found in Lower Austria where, on 1 January 1934, there were 59 out of a total of 124 co-operative societies, and where at the present time they undertake nearly all the marketing of farm products and the purchase of farm requisites.

By the foundation of the warehousing co-operative societies the middleman trade in cereals has almost entirely disappeared in Lower Austria. The majority of the farmers now consign their grain to these societies which transfer it subsequently to the Federation of Agricultural Co-operative Societies at Vienna. The influential position which this Federation holds on the Products Exchange enables it to treat directly with the consumer and thus to eliminate intermediary trade.

Owing to its continuous representation on the Exchange, the Federation is always completely cognisant of the market situation and is able to keep the co-operative societies informed of market prices. As the farmers organised in these societies deliver their products through the societies and Federations, very considerable sales of the different farm products can take place with a corresponding influence on the formation of cereal prices.

The agricultural organisation in the different Federal provinces is already sufficiently developed to be almost completely capable of also carrying on the sale of other farm products.

In addition to the activity in this respect of the Lower Austrian Federation of Agricultural Co-operative Societies, founded in 1898 with headquarters at Vienna, which represents the central trading organisation of the co-operative warehousing societies of Lower Austria, the co-operative trade in cereals is mainly carried out also by the Agency for trade in agricultural commodities of the *Kulturrat* of Upper Austria at Linz, founded in 1928. Both of these organisations purchase and sell at fixed prices and in some cases only on commission. The member co-operative societies are not, it is true, expected to supply their cereals to these two organisations but they do so voluntarily in their own interest. Long term contracts are not entered on.

The Lower Austrian Federation of Agricultural Co-operative Societies is the largest co-operative organisation for trading in commodities that exists in Austrian agriculture. In 1933 the membership was 129 with 78,923 shares fully paid up. The statutory liability of the members was twenty times their paid up shares, the total liability amounting to 1,578,460 schilling.

Apart from the Lower Austrian Chamber of Agriculture the Federation includes: 54 co-operative warehousing societies, four co-operative dairies, 13 co-operative distilleries, two co-operative wine making societies, and 34 various agricultural co-operative societies. In the trading year 1933 the Federation received from the member co-operative societies 18,017 truck loads of farm products, while the societies received from it 22,093 loads of farm requisites, a total turnover accordingly of 40,110 truck loads. As compared with 1932 there was an increased turnover of 9,237, or 30.7 per cent., due mainly to a larger supply of cereals. Reckoned per truck the administration expenses were 22.25 schilling compared with 30.41 in the previous year.

The policy for maintaining rye prices, carried out recently by the Federation in agreement with the Provincial Government, the Lower Austrian Chamber of Agriculture and the Lower Austrian Central Co-operative Bank, illustrates the strength and the economic resources of the Federation and of the co-operative warehousing societies belonging to it. The fact that the Federation handled in 1933 more than 40,000 loads of farm products and farm requisites is in itself a proof of the considerable range of its trading activity, amounting as it does to 3,300 loads per month or more than 100 per day. Of importance also is the fact that all transactions with the commodity Federations and with organisations of the other provinces are carried out by the Federation.

The following are the comparative figures of the prices of agricultural commodities in the prewar period (1913) and in 1933 (expressed in schilling per 100 kg.):

Kind of cereal	1913	1933
Wheat	35.40	34.00
Rye	27.25	18.60
Barley	26.50	20.50
Oats	27.40	18.60

Cereal prices are thus generally lower in 1933 than before the war. According to an investigation made by the League of Nations (*World Economic Survey*, 1932-33, p. 57, Geneva 1933), the prices of agricultural products in Austria, expressed in gold prices, fell by 27.1 per cent. from 1929 to 1933, while in other European States the percentage decline was much larger. The fall in the purchasing power of Austrian agriculture is due, *inter alia*, to the fact that the price of wheat, for example, in 1933 was 96 per cent. of the price in 1913. The price of milk was 97 per cent., that of cows 62 per cent., of pigs 88 per cent., of wine 80 per cent., etc., so that about 70 per cent. of the pre-war price may be reckoned as the present day proceeds of all that the farmer produces. On the other hand however the prices of the commodities he is obliged to purchase have greatly increased in comparison with 1913. For example, the cost of a scythe is 183 per cent. of the pre-war price, a harrow 139 per cent., a reaping hook 170 per cent., salt for live stock 231 per cent., etc., the general average of increase being at least 140 to 150 per cent., which shows that the exchange value of agricultural production is half the previous value. The problem of the divergence between prices of farm products and factory products thus has a very marked influence also on the commercial transactions of the co-operative societies for purchase and sale.

With a view to the special encouragement of the purchase of the requisites of Austrian agriculture, the Federal Government of Austria in 1924 instructed the General Federation of Agricultural Co-operative Societies to make the purchases of chemical fertilisers, purchases financed at a very reduced rate of interest by means of credits assigned to Austria by the League of Nations. In this way the individual farmers obtained favourable terms through their co-operative societies which in their turn procured fertilisers, seeds, etc., from the Federations of the provinces in which the societies were situated. The General Federation succeeded in obtaining out of this credit for the first year 8,000,000 schilling for this purpose, for the second year 7,000,000 schilling and for the third year (1926) 3,500,000 schilling. In consequence, agriculture has benefited in the form of credits for purchase of fertilisers by 18,500,000 schilling. " If at the present time we are able, " to quote the Report of the General Federation of Agricultural Co-operative Societies for 1929-30, " to obtain such high returns in agriculture, the policy of using the funds from the League of Nations credit for chemical fertilisers has largely contributed to this result. "

These subsidised purchases of fertilisers were continued after 1929 but were no longer financed out of the League of Nations credit but instead from budget allocations, while the financing of the purchases of commodities of the provincial Federations was effected, as each case arose, by the funds of the Central Clearing Bank. The Austrian consumption of chemical fertilisers was in 1933 about 110,000 tons of an approximate value of 18,000,000 schilling as compared with about 120,000 tons in 1932, the components being 72,378 tons of phosphoric acid, 23,646 tons of nitrogenous fertiliser, and 13,565 tons of potash.

The total business done in the different provincial Federations of co-operative societies in the years 1928, 1931 and 1932 is shown by the following statistics.

Commercial Transactions of the Co-operative Federations in the years 1928-1932 (Expressed in truckloads of 10,000 kg.)

Central Commodity Federations	Years	Cereals and feed grains	Potatoes	Hay and straw	Chemical fertilisers	Cereal seeds etc	Other items, machines, concentrated feeds	Total
1 – Lower Austrian Federation of Agricultural Co-operative Societies	1928	7,814	1 042	724	4,612	60	5,937	20,189
	1931	13 623	1 077	2 663	4 317	236	7,507	30,023
	1932	16 620	1 689	2 353	4,177	39	5,995	30,873
2 – Farmers' Federation of Styria.	1928	584	22	80	592	176	396	1,850
	1931	1,714	13	77	566	216	243	2,831
	1932	2,288	—	680	316	168	752	4,204
3 – Federation of Co operative Societies of Vorarlberg	1928	381	78 (1929)	40	350	14	762	1,553
	1931	907		65	214	215	445	1,996
	1932	688	—	55	164	4	464	1,375
4 – Federation of Co operative Societies of Tyrol	1928	352		225 (1929)	371	22	9 (1929)	703
	1931	457		238	409	11	17	1,172
	1932	304	—	178	311	16	2	871
5 – Federation of Agricultural Co-operative Societies of Carinthia	1928	188		90	328	—	38	644
	1931	887		96	356	—	32	1,371
	1932	1 001		124	242	—	246	1,613
6 – Federation of Agricultural Co operative Societies of Burgenland	1928	12			198	—	31	210
	1931	163		76	121	11	261	631
	1932	596		54	186	—	202	1,005

The largest volume of business was that done by the Lower Austrian Federation of Agricultural Co-operative Societies; then follow in order of importance the Federations of Styria, Vorarlberg, Tyrol, Carinthia and Burgenland. The relatively large purchases in requisites of production made by the Federations represent large orders for manufacturers in the agricultural industries of concentrated feeds, machinery or chemical fertilisers and other chemical products, which thus obtain a guaranteed demand for high quality products. The economic bond between town and country tends thus to be more closely drawn as a consequence of the intervention of the co-operative system, and the prospects of eliminating unnecessary intermediaries become more encouraging.

§ 10. MISCELLANEOUS AGRICULTURAL CO-OPERATIVE SOCIETIES.

The remaining co-operative societies, which are so organised as to be partly co-operative societies of production and partly societies for sale, can be briefly treated only for reasons of space. These societies for the most part confine their activity to a relatively narrow section of agricultural enterprise, although their influence may be sometimes very considerable. Some of these may be quoted as examples.

(a) *Co-operative Societies for Purchase of Farm-Machines.* — The function of these societies consists in the joint purchase of farm machines and implements for the use of members against payment of a fixed charge for the period for which they are needed, separate purchases of machinery being naturally impossible for the small farms. According to the agricultural census of 1930 there are in Austria 291,769 farms, or 67 per cent. of the total number, which own farm machinery. This is a fairly high percentage for Austria, where only a small part of the total area is plainland, and where consequently the use of machines for working the land is somewhat limited.

The following figures taken from the agricultural census show the number of farms using their own machinery, borrowed machinery or machinery jointly utilised·

	Number of farms using machines	Seed-Drills	Reapers	Threshers	Graders for cereals	Chaff Straw cutter	Grinders and crushers	Centrifugal separators
1	Owned .	25,572	21,869	113,404	18,290	227,428	58,886	130,148
2	Borrowed .	7,612	467	30,305	5,260	1,897	847	728
3	Used in common	8,908	1,818	26,950	13,182	1,857	2,236	465

The machines most generally employed in common are the most costly, namely, the threshing machines, on 26,950 farms; graders for cereals are in joint use on 13,182 farms; seed-drills on 8,908 farms; grinders are in joint use on 2.236

farms, reapers on 1,818 and separators on only 465 farms. These figures relate to the joint utilisation of farm machinery which will coincide probably frequently, although not always, with the co-operative utilisation.

(b) *Co-operative Societies for Land Improvement.* — In the course of the years 1857 to 1914 land improvement operations were carried out on 28,000 hectares, distributed through 396 communes in Lower Austria, and were almost exclusively co-operative undertakings. These operations were brought to a standstill by the war, but from 1920 onwards the work was resumed with the financial support of the Federal Government. In the last ten years a total area of 11,600 hectares has been improved, and in the years 1931 and 1932 alone land drainage work has been effected, in 1931 on a total area of 5,364 hectares, including 2,012 hectares drained by co-operative societies, and in 1932 on 2,237 hectares, including 917 drained by co-operative societies.

(c) *Co-operative Distilleries.* — The object of this type of co-operative society is the transformation of products grown on members' farms, in particular potatoes, into alcohol in farm distilleries managed by the societies themselves, and its sale. The potato residues obtained in the course of the process, which represent an excellent stock feed, are sold cheaply to the farmers belonging to the co-operative society, enabling them to keep larger numbers of animals.

Among the 1,498 farm distilleries of alcohol of former Austria, 1,482 were situated in the territory now forming part of Czechoslovakia and Poland. During the war years the manufacture of alcohol was prohibited in the farm distilleries, as using potatoes and cereals as raw materials. During the first distilling season that followed the conclusion of the war, 1919-20, three farm distilleries resumed work with an output of 80 hectolitres only of alcohol. In 1924 the number of distilleries rose to 19, and in the same year the Federation of farm distilleries of Austria was founded, and was joined by all the existing distilleries. The greater number of the co-operative distilleries were founded after 1926. This was made possible by the law on alcohol enacted on 23 September 1926, in which it was established that every co-operative distillery should have the right to manufacture for each distilling season a total quantity of 1,600 hectolitres of alcohol. In 1927-28 the number of new co-operative distilleries founded was 12, the number being limited simply because the Government had fixed a quota in respect of the total quantity to be distilled.

The proportionate share of agriculture in the total production of alcohol rose from one per cent. before the war to 28 per cent. in recent years. In accordance with this percentage the quota assigned to agriculture during the distilling season of 1932-33 was 56,000 hectolitres of alcohol divided between 61 farm distilleries. The maximum output of the distilleries was 71,785 hectolitres in 1930, a quantity which subsequently fell somewhat lower.

(d) *Co-operative Wine-making Societies.* -- These societies take charge of their members' grape harvest and wine and arrange for the direct sale of these products to consumers. The delivery is obligatory on the part of the members,

and they receive for their grapes payment on account up to 75 per cent. The greater part of these co-operative societies, especially those which were founded before the war and which have made large capital investments, are on a basis of unlimited liability. The larger number are to be found in Tyrol.

(e) *Co-operative Fruit-marketing Societies.* — The development of these societies is still in an initial stage There are five in Lower Austria and one in each of the provinces of Burgenland, Styria and the Tyrol. Austria has in addition large areas especially suitable to fruit cultivation. At present the marketing question is also a pressing one in these regions, for the country cannot itself consume the whole yield of a good crop and, in consequence recourse must be had to exportation. For a certain number of years the competent authorities and organisations, among which are also the fruit-growing unions, are endeavouring to take all measures required for a regulated marketing of fruit.

In the autumn of 1934, the Federal Ministry of Agriculture and Forests, set up at Munchendorf near Vienna the Austrian Society for Fruit Valorisation, the object of which was the transformation, in accordance with the process used by the similar co-operative society at Bischofszell in Switzerland, of fruit juice into alcohol-free cider, and if required also the exportation of fruits This society possesses interest from the fact that a number of agricultural organisations have taken part in its foundation, including the Lower Austrian Chamber of Agriculture, the Central of the agricultural co-operative societies of Lower Austria and the Swiss Co-operative Society for valorisation of fruits at Bischofszell, and on the other hand, the Wholesale Company of Austrian Consumers' societies At the end of 1934 the society had already produced 1,500,000 litres of alcohol-free cider.

Export of fruit from Austria has developed in these last few years as follows

	Quantity		Value	
1930	477,450	quintals	19,137,000	schilling
1931	54,933	»	3,282,000	»
1932	672,864	»	13,974,000	»
1933	105,527	»	3,267,000	»

As compared with the 1930 export, that of 1933 represents less than one fourth in volume and hardly one sixth in value

(f) *Egg Marketing Co-operative Societies* — The egg marketing societies are grouped into a central co-operative society for marketing of eggs and of poultry which undertakes the improvement of production and the marketing of the eggs. In addition to a whole series of co-operative dairies, there are in the first place three large central organisations which undertake to collect the eggs: the Lower Austrian Dairy Federation, the Central Co-operative for Sale of First quality butter (*Erste Zentrale Teebutterverkaufsgenossenschaft*) at Schärding on Inn and the Agricultural Federation of Co-operative Dairy Societies in Lower Austria.

The production of eggs in Austria is following a similar course to that followed some years ago by dairying. It is becoming a considerable source of income to the farmers. Of the whole numbers of Austrian farms 89.7 per cent., or 388,724 farms, undertake poultry keeping. For the breeding there are special farms, and large poultry breeding farms have come into existence since the war. These contain 16 per cent. of all the head of poultry, the remaining 84 per cent. being found on the small farms. The import of poultry and eggs is mainly from Hungary, Yugoslavia, Poland, etc., and has shown a tendency to increase although the value of this import has steadily fallen in volume (especially in regard to poultry) as appears from the following figures (value in schilling):—

1928	65,713,000
1929	65,251,000
1930	61,941,000
1931	51,119,000
1932	35,498,000
1933	31,421,000

The conditions of the market for eggs in Austria had not been fully regulated up to now. The national and foreign supplies were made on no fixed plan and merely followed the seasonal production without taking into account requirements of consumption, supply and demand, and in consequence the price was subject to very great fluctuations

The Federal Ministry of Agriculture issued on 7 August 1934 new provisions in respect of the import of eggs, in accordance with which, beginning with the second quarter of 1935, there will be a special assignment of foreign quotas for egg imports. This assignment will be based on the volume of the purchases of national fresh eggs actually made on the Exchange of Farm Products at Vienna. It is with the help of these home purchases which can take place only through the intermediary of the Egg Exchange that the " National Scale " is reckoned. The national scale holding good for the period from 1 April 1935 to 31 May 1936 is established on the basis of the national purchases made from 1 July to 31 December 1934.

(g) *Co-operative Society for the Utilisation of Resin Products.* — This society was founded at Plesting in 1909 It is equipped with the most modern machinery and undertakes the manufacture of resin and of turpentine oils which can compete with the finest varieties in the world market. The output has now increased from 22 truck loads in 1909 to 500 of crude resin per year, a volume which at present covers at least 60 per cent. of the Austrian demand for resin and nearly 100 per cent. of the demand for turpentine. This co-operative society is the only one of its type in all Central Europe, as it is only in the region concerned—the black pine forests to the south of Vienna—that the species of pine grows from which the resin is obtained.

§ 11. Direct Economic Relations between the Agricultural Co-operative Societies and the Consumers' Co-operative Societies.

In the course of this study of the economic activity of the agricultural co-operative societies it has been several times noted that the Austrian co-operative associations are trying to eliminate, in respect of the trade in agricultural products, as much as possible the superfluous intermediary transactions and to bring their products directly to the consumer. In this way it becomes possible not merely to obtain remunerative prices for the growers and for the consumers and to achieve a certain stability of these prices, but also better to adapt agricultural production to the urban market. In this connection, the co-operative society goes beyond the narrow limits of actual farming interests and pursues an economic object of a higher kind, taking an intimate part in the whole national economy. To quote M. Augé-Laribé, Secretary General of the Confédération agricole française: " In order that co-operation may make good all its promises, it is not enough that it should be a collection of individual interests, engaged in entrenching themselves within their own circle of ideas, it is essential that it should cherish, not only the corporative, but the co-operative spirit, that is to say, the ideas of solidarity and of the general interest." (*Syndicats et coopératives agricoles.* Paris, 1926, pp. 202-203.) The difficulty of realising this ideal is equalled only by its nobility.

The beginnings of a closer bond between Austrian producers and consumers may be found in the early post-war years. With the collaboration of the then existent State Offices for national food supply, agriculture and finance, there was founded at the end of 1918 a special company for the sale of commodities to meet the requirements of town and country (*Warenverkehrsstelle zur Deckung des Bedarfs von Stadt und Land*) which was intended to act as intermediary between the rural population grouped in co-operative societies, and the working class. Its function was mainly to supply the rural population with manufactured goods as reasonably as possible and at the same time to supply foodstuffs more intensively to the towns, making use for both purposes of its connection with the Wholesale Company for Austrian Consumers' Unions, founded in 1905, and also with certain private enterprises. In August 1920, the Austrian Federal Government, the Wholesale Company referred to and the " Ara " Company for the trade in farm requisites, became the principal shareholders of the *Warenverkehrsstelle.* This organisation engaged in home and foreign trade, and established branches at Graz, Linz and Salzburg. In 1923 the balance sheet total was 1,500,000 gold crowns. No great prosperity attended the enterprise, a fact for which not the least important reason was the opposition between the two classes of population, rural and urban, with their divergent mentalities and social ideals. At the same time, as already noted (§ 5) in consequence of the inflation, the agricultural co-operative societies lost much of their influence among the farming population, which was driven to depend instead upon private dealers, until finally in the summer of 1924 the deflation brought the farming classes back to their co-operative societies.

Meanwhile the food problem had become less acute, the cost of living had somewhat diminished, and the whole movement for closer contact between town and country advanced no further, although direct purchases took place sporadically between consumers' co-operative societies and agricultural co-operative societies.

Since the oncoming of the economic crisis, further attempts have been made to revive, by means of trading contacts, the connection between the two groups of co-operative societies. In addition to the activity of this kind displayed by the co-operative dairies, the co-operative stock farming societies and by those for purchase and sale, as already noted in the foregoing sections, mention may be made here of some other facts of the same nature which better illustrate the present tendency to bring about closer trading relations between the farmers' and the consumers' organisations, with a view to the elimination of intermediaries. It will of course be understood that co-operating farmers have no intention, either in Austria or anywhere else, of completely eliminating intermediary trading, which must, on the contrary, remain, so far as it is economically justified, at the basis of all circulation and of all distibution of agricultural products. They desire only to get rid of the unhealthy forms of trading which are prejudicial not only to agriculture but to the whole national economy.

In 1930 the interco-operative Committee was formed at Vienna, including as members the following organisations: the General Federation of Agricultural Co-operative Societies of Austria, the Central Federation of Austrian Consumers' Societies and the Wholesale Company of Austrian Consumers' Unions. The Committee consists of ten members, five for the agricultural and five for the consumers' co-operative societies. The functions of President of the Committee are exercised alternately by a representative of the General Federation of Austrian Co-operative Societies and one of the Central Federation of Consumers' Societies. The Committee meet every time that the economic circumstances make a mutual understanding necessary, or that difficulties arise in the course of discussion of business between the two groups concerned, or whenever it is necessary that these groups should come to an agreement on questions of a legislative, economic or administrative kind. The Committee is a member of the International Committee of Interco-operative Relations, formed on joint initiative of the International Co-operative Alliance and of the International Committee of Agriculture, the object of which is to promote the development of moral and economic relations between agricultural co-operative societies and consumers' societies in the different countries. At the meetings of the International Committee the International Institute of Agriculture and the International Labour Office are also represented.

Some progress is also being made as to the direct supplies in farm products made by the rural co-operative societies to public corporations and institutions. In spite of the Ordinance of 26 October 1933 which was a general prohibition of supplies of this kind to industrial co-operative societies, the agricultural societies were not affected by the commercial restrictions prescribed. The prohibition, in fact, does not apply to cases in which the sale is intended to meet the requirements in farming requisites, or to those where the object of the society is the production to the sale of commodities and where the sale is confined within the scope of this co-operative object.

The attitude of farmers to the consumers' co-operative societies may be characterised by the following fact: at the plenary meeting of the Lower Austrian Chamber of Agriculture held towards the end of 1933, at which the measures taken by the Government against the consumers' societies were examined, the former Minister, M. Buchinger, declared that the limitation of the sphere of action of the consumers' co-operative societies, as well as the attempt made to prevent these societies from accepting new members, was directed against the interests of agricultural co-operation itself, since the consumers' co-operative societies—which moreover had for years past aspired to have good relations with the agricultural co-operative societies—are the best and most reliable customers of these latter.

This is a very interesting avowal coming from agricultural co-operative circles. It may be that it points to a new more important phase in the reciprocal relations of the two types of co-operative societies, one in which the object is to balance so far as possible supply and demand, and thus to introduce into the whole of Austrian economy an element of planning. The further economic life advances towards a planned system, and the wider, in consequence, is the State intervention in production and price formation, the more necessary will become an understanding between the co-operative societies for rural production and those for urban consumption in order that they may take an active share in this development.

Such is the great social task reserved, for the welfare of all, to the co-operative organisations of Austria.

M. TCHERKINSKY

BIBLIOGRAPHY ON ECONOMIC AND SOCIAL QUESTIONS

ANGELINI Prof Franco, Member of the Italian Chamber of Deputies, President of the Fascist Confederation of Agricultural Workers of Italy *L'Organisation syndicale corporative de l'agriculture en Italie.* (Lecture delivered at the *Institut des Hautes Etudes agraires* of the Sorbonne, in Paris). Rome, Tipografia Arte della Stampa, 1934

[This lecture includes in the first place a very brief historical introduction on the social conditions of the agricultural classes before the advent of the Fascist regime. This is followed by an extremely clear and systematic statement of the syndical corporative organisation of agriculture (masters, farm workers and technicians). The harmonious working of the syndicates, and of the National Federations, Confederations and Provincial Unions depending on these, in explained. Some account is also given of the Corporations which group the representatives of the categories concerned in the cycle of production, transformation and distribution of products These bodies complete the economic and social edifice of the organisation of production and labour in Italy, with special relation to agriculture].

Società Italiane per Azioni. — *Notizie statistiche.* Roma 1934.

[In the course of 1934 the 14th edition appeared, of this valuable publication which has been issued for a number of years by the Associazione fra le Società Italiane. The first ten issues had been published by the " Credito Italiano " bank

As with the previous volumes, this one covers all the Italian societies operating in Italy and in the Italian Colonies with at least 1,000,000 liras of nominal capital, and all the affiliated societies even if they have less than 1,000,000 liras of capital.

The figures and information contained in the 1934 edition, which extends to 2 + 487 pages, refer to the balance sheets closed up to 31 March 1934, and have been obtained directly, or from official publications or documents. The societies reviewed in this volume include 4,217 share companies with headquarters in the Kingdom with 44,218,489,018 liras of nominal capital; 40 co-operative societies with 274,284,738 liras of paid up capital; 41 societies with headquarters in the Colonies with 180,065,000 liras of nominal capital; 19 miscellaneous institutions].

The Indian Co-operative Review. Vol. I, No. 1. January 1935. Published by V. Ramadas Pantulu, Mylapore, Madras.

[The All-India Co-operative Institutes' Association, of which this Review is to be the organ, was formed in 1929 for the purpose of stimulating what may be termed the unofficial aspect of the co-operative movement in India. The co-operative system in the provinces of British India is regulated by the Co-operative Societies' Act of 1912, which empowered the Government of each province to appoint a Registrar for registration, audit and the liquidation of societies. Credit and banking facilities are obtained from the Provincial and Central Banks.

The valuable constructive work of the Registrars and their officers is, however, supplemented by the non-official action of provincial Institutes and Unions, which consists in local propaganda and advisory work for the promotion and diffusion of co-operation, more especially among the largely illiterate village populations of each province. The foundation of the All-India Co-operative Institutes' Association has been a step towards the strengthening of this side of the work, and the significance of the new departure was recognised in 1931 by the Report of the Indian Central Banking Enquiry Committee, which recommended that the Co-operative Societies' Act should be amended so as to provide for registration of the Association

It will accordingly be seen that the publication of a quarterly journal as an organ of the Association - actually the outcome of a resolution passed by the Conference held at Hyderabad in 1931 —may be regarded as a landmark in the development of co-operation in India The intention is to provide thereby a medium for the publication of articles on co-operation that should be of interest to the whole of India, and even to a wider public, while in addition space will be given to notes on co-operative legislation, experiments and activities in other countries. It is proposed at the same time to maintain close contact with the existing provincial journals of co-operation, which will provide authoritative material for treatment of local topics, and it is hoped that the progressive development of the provincial journals appearing preferably both in English and in the vernacular—will go on *pari passu* with that of the new Review

The first number contains discussions of problems relating to: 1. agricultural credit; 2. debt conciliation, 3. consolidation of holdings on a co-operative basis; 4. arbitration societies and women's societies, which are being tried out in the Punjab, 5. co-operative education; 6. co-operative marketing. It is intended to take up one or two of these separately in succeeding issues giving more intensive treatment.

The Review is well printed and attractively produced; the editor is a recognised authority on co-operation in India, and there is abundant evidence that the need for a journal of this order has long been felt in India both in official and in non-official co-operative circles. It should in fact become a valuable contribution to the literature of the subject].

PUBLICATIONS RECEIVED BY THE LIBRARY

Books.

Economics.

REICHS-KREDIT-GESELLSCHAFT AKTIENGESELLSCHAFT, BERLIN. La situation économique de l'Allemagne à la fin de l'année 1934. Berlin, Reichsdruckerei, 92 p

Co-operation.

BRUGSFORENINGS-STATISTIK 1933. UDVIGET AF FAELLESFORENINGEN FOR DANMARKS BRUGSFORENINGER. København, 1934 136 p. (6 Beretning fra F. D. B s Statistikudvalg). (Statistique des coopératives de consommation. Publiée par la Fédération des coopératives de consommation du Danemark).

Statistics

WELTZUCKER-STATISTIK 1933-34, 1932-33, 1931-32 und Schätzung 1934-35. Magdeburg, [1935], 33 p (F. O. Licht G m b. H. Magdeburg)

Commerce

ANNUARIO DEL COMMERCIO ITALO-SVIZZERO 1934. V Edizione Milano, A. Cordani, [1934] 470 p (Camera di commercio italiana per la Svizzera).

ANNUARIO GENERALE DELLE COLLETTIVITÀ ITALIANE ALL'ESTERO E DEGLI ESPORTATORI ED IMPORTATORI ITALIANI Edizione 1935 Trieste, Stabilimento Tipografico Mutilati, Milano, 1935 420 p

ANNUAIRE DU COMMERCE INTERNATIONAL. L'annuaire bleu Encyclopédie économique universelle établie sous la direction de M. ARMAND MEGGLÉ 1934. [Paris, Megglé 1934] 1602 p.

ÅRSBERETNING FRA LANDBRUKETS PRISCENTRAL. Landbrukets Priser i 1934. s l. 1935 54 p. (Annuaire de l'Administration centrale des prix agricoles en Norvège. Prix agricoles en 1934)

FEHR, FRANK & CO. Review of the oilseed, oil and oil cake markets for 1934 London [1935]. 80 p.

TRUFFI F. Lezioni di merceologia. Materie oleose. Parte speciale. (Olii grassi e cere) Anno accademico 1933-34. Padova « Cedam », [1934]. 204 p. (R. Istituto superiore di scienze economiche e commerciali, Venezia).

Various

JAHRESBERICHT DER PREUSSISCHEN STAATSBIBLIOTHEK 1933. Berlin & Leipzig, W. de Gruyter, 1934. 104 p.

VON LINDERN, P. Quelques aspects économiques et politiques de la radiodiffusion. P. Laris, Librairie générale de droit et de jurisprudence, 1934. 178 p.

Periodicals (1), (2), (3).

ACTION agricole. v. 13, 1931. hebd. Paris. 50 fr. p. a.

ALBERGO in Italia. v. 11, 1935. mens. Milano. L. 10,50 int.; L. 20,50 étr. (Touring club italiano).

AMERICAN cattle producer. v. 16, 1934. mens. Denver, Col. $ 1,00 int.; $ 1,50 étr. (The American national live stock association). [Formerly: « The Producer »].

ANKARA. Edition française hebdomadaire du « Ulus » (Hakimiyeti Milliye). v. 1, 1934. Ankara. 250 P. int.; 35 fr. étr.

AZIONE coloniale. v. 5, 1935. hebd. Roma. L. 15 int.; L. 35 étr. [Containing since 1935: « Atti dell'Istituto coloniale fascista »].

BERLINER Tageblatt und Handels-Zeitung. Morgen und Abend-Ausgabe. v. 64, 1935. q. Berlin. RM 48, port en sus.

BOLETIM do Ministerio do trabalho, industria e commercio. nº 1, 1934. mens. Rio de Janeiro.

BOLETÍN de bibliotecas y bibliografía. v. 1, 1934. trim. Madrid. 10 Ptas. int.; 15 Ptas. étr. (Asociación de bibliotecarios y bibliógrafos de España).

BOLETÍN de la Camara de comercio de Caracas. v. 16, 1927. mens. 24 Bs. p. a.

BOLETÍN de impuestos interiores. nº 201, 1932. mens. Mexico. $ 5,00 int., Dls. 2,50 étr. (Secretaría de hacienda y credito publico). [Formerly: « Boletin de informaciones »].

BOLETÍN semestral de estadística de la Republica de Costa Rica-A. C. v. 1, 1934. San José. (Dirección general de estadística).

BRASIL açucareiro. v. 3, 1934. mens. Rio de Janeiro. 24$000 int.; 30$000 étr. (Instituto do açúcar e do alcool).

BULLETIN des Archives d'économie mondiale de Hambourg. nº 1, 1934. bimens. RM. 10, port en sus. (Archives d'économie mondiale, Institut scientifique de l'État de Hambourg). [German, English, Spanish and French editions].

CHIMICA e industria. v. 17, 1935. mens. Milano. L. 75 int.; L. 100 étr. [Incorporating: « Giornale di chimica industriale ed applicata » and « L'Industria chimica. Il Notiziario chimico-industriale »].

CUBA agricola. v. 1, 1934. mens. La Habana. $ 1,50 int.; $ 2,00 étr.

CURRENT survey of agricultural policy. (Digest of press news). nº 1, 1934. Oxford.

ESTADÍSTICA mensual. v. 2, 1934. Panamà. (Dirección general de estadística). [Incorporating since July 1934, « Departamento de estadística. Boletín »].

EXPORTACIÓN de la República Dominicana. v. 3, 1934. mens. Santo Domingo. (Departamento de comercio, industria y estadística). [Mimeographed].

GESETZBLATT der Stadt Wien. 1934. irr. Wien. (Österreichische Staatsdruckerei). [Formerly: « Landesgesetzblatt für Wien »].

IMPORTACIÓN y exportación de la República Dominicana. 1933-34. sem. Santo Domingo. (Departamento de comercio, industria y estadística). [Mimeographed]

INDIAN economist. v. 4, 1934. hebd. Calcutta. Rs. 24 p. a.

(1) Previous list December 1934. To be continued Juin 1935.

(2) List of abbreviations: bihebd (biweekly); bimens (twice monthly); bimestr. (every two months); déc. (every ten days); étr. (foreign price), f. (copy); hebd. (weekly); int. (home price); irr. (irregular); mens (monthly); nº (number); N. S. (new series); p. a. (per annum); q. (daily); sem. (half yearly); s (series); trihebd. (every three weeks); v. (volume); trim. (quarterly).

(3) Between brackets [/] are given translations and explanatory notes not appearing in the title of the review.

IQTISADIYÂT arabiya. (The Arab economic journal. Le journal économique arabe). v. 1, 1935. bimens. Jerusalem 600 mils int.; 15s. étr. [Title in three languages: Arabic, English and French. Text in Arabic].

KONJUNKTUUR. Monthly review of the Estonian institute of economic research. nº 1, 1934. Tallinn. Kr. 8 int.; Kr. 12 étr. [Title of the review and articles in Estonian and English. Supplement annexed of 8 to 12 pages in English].

MARGARINE-INDUSTRIE. v. 28, 1935. bimens. Berlin. RM 20,40 int.; RM. 30 étr. (Reichsverband der Margarine-Industrie Deutschlands E. V.).

MESSAGER de Téhéran. v. 10, 1935. q.

MITTEILUNGEN des Hamburgischen Welt-Wirtschafts-Archivs. nº 1, 1934. bimens. Hamburg. RM. 10 et port. (Hamburgisches Welt-Wirtschafts-Archiv. Wissenschaftliche Anstalt des Hamburgischen Staates). [German, English, Spanish and French editions].

OFFICIAL journal of the Scottish milk marketing board. v. 1, 1934. mens. Glasgow. 2s. p. a.

PAPPERS- OCH TRAVARUTIDSKRIFT för Finland. (Suomen paperi- ja puutavaralehti. The Finnish paper and timber journal). v. 16, 1934. bimens. Helsingfors. Fmk. 150 int ; Fmk. 200 étr. (Finska träförädlingsindustriernas centralförbund). [Tri-lingual edition: Swedish, Finnish and English]

PLANNING. (Political and economic planning). n' 17, 1934. bimens. London.

RADIO rurale. v. 2, 1934. mens. Roma. (Ente radio rurale).

REVISTA industrial. v. 1, 1933. mens. Mexico. $ 10,00 int ; $ 20,00 ou 25,00 étr (Secretaría de la economía nacional).

REVISTA del Instituto de defensa del café de Costa Rica. v. 1, 1934. mens. San José.

REVISTA del Ministerio de industrias v. 1, 1934. mens. Montevideo.

SCHAFFENDES Landvolk v. 26, nº. 26, 1934. hebd. Berlin. (Reichsbetriebsgemeinschaft Landwirtschaft). [Formerly: « Der deutsche Landarbeiter »].

SCHWEIZERISCHE Nationalbank. (Banque nationale suisse). Monatsbericht (Bulletin mensuel). v. 6, 1931. Zürich. Fr. 3 p. a. [Bi-lingual edition].

STRADE. v. 15, 1935, mens. Milano. L. 12,50 int.; L. 22,50 étr. (Touring club italiano).

SVENSK trävaru-tidning. (The Swedish timber journal). v. 51, 1935 bimens. Stockholm. Kr. 32 en Suède, Norvège et Danemark, Kr. 36 étr. [Containing as annex: « Svensk pappersmasse-tidning » (The Swedish wood pulp journal). [Bi-lingual edition].

TRAVAUX des chambres d'agriculture. v. 3, 1932. mens. Paris. 30 fr. p. a.

VERKÜNDUNGSBLATT des Reichsnährstandes. nº 1, 1935. irr. Berlin RM 14,40 int., port en sus étr.

WESTDEUTSCHE Land-Zeitung. vol 16, 1935. quot Krefeld. [Formerly: « Westdeutsche Bauern-Zeitung »].

WOCHENBLATT der Landesbauernschaft Rheinland, 1935. Köln. RM 5,52 p. a. [Formerly: « Der Rheinische Bauernstand »].

WOCHENBLATT der Landesbauernschaft Sachsen-Anhalt. vol. 93. 1935. hebd. Halle. RM. 8,40. [Formerly: « Landwirtschaftliche Wochenschrift. Zeitschrift der Landesbauernschaft Sachsen-Anhalt »].

WOCHENBLATT der Landesbauernschaft Schlesien., vol. 2, 1935. hebd. Breslau. [Formerly: « Der schlesische Bauernstand »].

WOCHENBLATT der Landesbauernschaft Westfalen. 1935. hebd. Münster i. W. RM. 5,52. [Formerly: « Westfälischer Bauernstand »].

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STUDIES ON THE INTERNATIONAL MARKET FOR AGRICULTURAL PRODUCTS

II. – Effect of Changes in International Price Levels on the Principal Markets for Eggs in the Shell 1926-1933.

Since international trade in exchange of commodities consists in business transactions, the simplest trading principles must be also applicable to such exchange. The calculable financial profit may be regarded as the simplest principle; this seems in the first place to stimulate supply, but may subsequently have an influence on the extent of the business done. In any case such principles always form the basis for transactions between human beings, and must accordingly be established for exchange of commodities between countries, which for purposes of trading may be considered as merely the group conception of individuals.

In this article it is proposed to consider how far differences and changes in international price levels (alike of importing and of exporting countries), expressed in gold or Swiss francs, have affected imports on markets, that is to say, exports of the supplying countries, with special reference to the world market for eggs in shell in the years 1926 to 1933.

Apart from the presence of a certain margin or difference in price levels international trading is inconceivable. This margin represents, considered from the standpoint of the exporter, the highest limit of attainable gross profit, which must however cover all trading, transport and tariff costs and charges. Considered from the standpoint of the importer a wide margin makes it possible to buy relatively cheaply and to sell at corresponding rates. Within this margin lies the actual price on the basis of which the business is successfully done.

Tariffs are, generally speaking, considered to be an important inhibiting factor in international trade in commodities If, however, the tariff rates are compared with this price margin, it will be seen that, in respect of eggs, tariff rates, even the autonomous, represent small values only in comparison with the extent of the price margin. Such a comparison is attempted below and shows that, taking the average of the six markets indicated for eggs in shell, the price margin in 1931 amounted to 4.19 gold francs per 100 eggs, while, on the other hand, the average autonomous tariff rates amounted to 0.95 gold francs only per 100, *i. e.*, about one fourth of the price margin, and the conventional tariff rates to only 0.50 gold francs per 100, *i. e.*, about one eighth of the price margin.

Countries	Autonomous tariff rates (mid-February 1931)	Conventional tariff rates (mid-February 1931)	Price margin (yearly average 1931)
	gold francs per 100 eggs		
Germany	2.31	0.38	2.37
Great Britain	free	free	4.75
France	0.31	0.31	3.63
Switzerland	0.94	0.94	8.59
Czechoslovakia	0.61	0.38	3.32
Spain	0.59	–	2.48
Arithmetic mean	0.95	0.50	4.19

Unfortunately it is not possible to give a comparison extending over all the years here under review of the tariff rates and the price margins since the statistical bases are not forthcoming. For the purposes of this article it appears to be sufficient to present this situation, as it occurred in 1931, a year, that is, in which there was an extensive application of protective tariffs.

In spite of the tariffs, the rates of which have been shown to be of small importance as compared with the price margin, the international trade in eggs in the shell was conducted on purely economic lines until the protective tariff was replaced by the quotas and clearing system, which in origin and motive force is undoubtedly to a great extent conditioned by the limitations of the international course of payments, and is accordingly to be considered as an emergency measure. This emergency measure however counteracts the levelling tendency of the international trade which whether conducted freely or hampered by tariffs is none the less directed by economic considerations only; a fact which can be illustrated from the examples given here for world trade in eggs in the shell.

As regards the construction of the price margin there still remains something to be said. As basis for the ascertainment of this margin the home market quotations of the different countries were taken, not the so-called export prices, since it was important for our purpose to represent the actual international price level and its changes, so far as the unfortunately much restricted material admitted, and to compare these changes with the fluctuations of the import and export volumes of eggs in the shell.

The export prices officially noted in the different countries for eggs in the shell could not be used, because they included the most varying supplementary charges. For example in the Netherlands these prices included a certain sum, which the Government adds to the price, in order to give the producers a compensation for the rise in the prices of feed grain owing to the Governmental measures, apart from which the egg producers could not carry on on account of the special national price conditions. The method we have adopted of using the national price quotations will be found adequate for the elucidation of the questions here raised.

Certain limits are set to the consideration of the questions proposed by the quota and clearing system, which substitutes for the multilateral international trade the bilateral type, thereby excluding competition and the levelling effect of the former position of the international price level. By this means the purchasing country is necessarily forced, as the condition of consignment of its own goods, chiefly finished manufactures, to purchase from a country commodities, in this case eggs in the shell, at a price which may be far above that of supplies of similar quality from other lands.

In Table I the average gold franc values appear of the markets in respect of which sufficient data exist, the markets included being Germany, Great Britain, Switzerland, France, Spain and Czechoslovakia. The prices are distributed according to supply and demand, and there are also shown the differences between the supply and demand prices of the markets indicated.

In the first place attention is drawn to the average result of the whole table in column I, which represents the arithmetic mean of all the items. The supply on these markets in 1926 is seen to be at 14.26 gold francs per 100 eggs, and it is of interest to note that the culminating years of the last conjuncture period could have no influence on the average gold franc value of the supply. In 1927 the value was 0.30 gold francs higher than in 1926, but fell in 1928, rising in 1929 but not so as to attain the level of 1926. From 1929 it drops sharply and is almost halved by 1933.

TABLE I (1).

(a) Supply Prices on the Markets in gold francs per 100 eggs.

Years	Germany 1	Great Britain 2	Switzerland 3	France 4	Spain 5	Czecho-slovakia 6	Arithmetic mean value
1926 . . .	14 31	14 41	13 81	14 29	14 46	—	14 26
1927 . . .	14 11	14 76	14 64	14 50	14 78	—	14 56
1928	13 39	14 62	13 74	13 34	14 65	10 40	13 36
1929	13 94	15 30	14 52	13 61	15 44	11 58	14 07
1930 . . .	11 33	12 83	12 04	11 44	12 91	8 62	11 53
1931 . . .	9 31	10 85	10 41	9 68	10 88	6 96	9 68
1932 . . .	7 07	8 60	8 70	7 66	8 93	5 85	7 80
1933.	6 61	8 62	8 72	7 81	7 69	4 98	7 41

(1) Note to Table I: The supply prices on the markets are composed of the separate prices of the following countries:

1. Germany. Belgium, Netherlands, Denmark, Sweden, Poland, Italy
2. Great Britain: Irish Free State, Belgium, Netherlands, Denmark, Italy, France
3. Switzerland: France, Italy, Belgium, Netherlands, Poland.
4. France: Belgium, Italy, Netherlands, Poland.
5. Spain: Germany, Belgium, Denmark, France, Netherlands, Italy.
6. Czechoslovakia · Poland.

(b) Demand Prices on the Markets in gold francs per 100 eggs.

Years	Germany 1	Great Britain 2	Switzerland 3	France 4	Spain 5	Czechoslovakia 6	Arithmetic mean value 7
1926.	16.79	22.05	22.30	12 34	18.04	—	17.36
1927.	15.98	21.00	22.30	10.10	18.15	—	17.78
1928.	15.84	21 21	22.00	15.38	15.99	12.64	16 96
1929.	17.55	23.10	23.00	16.36	15.34	14.14	17.61
1930.	14.45	19 48	20 00	14 44	12.82	11.36	15.09
1931.	11.68	15.60	19.00	13 31	11.41	10.28	13.36
1932.	9.87	11 25	16.00	12 84	—	9.34	12.49
1933.	11.10	10 39	14.00	11.45	—	9.16	11.74

(c) Price Margins (Differences between Supply and Demand Prices on the Markets) in gold francs per 100 eggs.

Years	Germany 1	Great Britain 2	Switzerland 3	France 4	Spain 5	Czechoslovakia 6	Averages of price margins 7
1926.	— 2.48	— 7 64	— 8 49	+ 1 95	— 3.58	—	— 3 10
1927.	— 1 87	— 6.24	— 7.66	— 0.60	— 3.37	—	— 3 22
1928.	— 2.45	— 6 59	— 8 26	— 2 04	— 1.34	— 2.24	— 3.60
1929.	— 3.61	— 7.80	— 8.48	— 2.75	— 2 43	— 2.56	— 3 54
1930.	— 3.12	— 6 65	— 7 96	— 3 00	— 1.94	— 2.74	— 3.56
1931.	— 2.37	— 4 75	— 8.59	— 3.63	— 2.48	— 3.32	— 3.68
1932.	— 2 80	— 3 15	— 7 30	— 5 18	—	— 3.49	— 4.09
1933.	— 4.49	— 1 77	— 5 28	— 3.64	—	— 4.18	— 4.33

(d) Imports on the Markets of Eggs in Shell in thousands of quintals.

Years	Germany 1	Great Britain 2	Switzerland 3	France 4	Spain 5	Czechoslovakia 6	Total 7
1926.	825	1,108	56	21	64	26	2,100
1927.	861	1,182	58	15	126	26	2,268
1928.	883	1,398	67	33	198	40	2,619
1929.	966	1,321	69	58	123	41	2,578
1930.	868	1,369	71	74	92	51	2,525
1931.	740	1,361	71	185	30	81	2,468
1932.	970	1,001	81	28	41	125	2,246
1933.	597	835	39	20	112	4	1,607

On the other hand a much more constant development is noted in the gold franc values of the demand countries. Here the price per 100 eggs rises from 1926 to 1929, although with fluctuations in the earlier years, then it falls abruptly till 1933, but not losing more than 30 per cent. of its level in 1929.

The differences between the gold franc prices of the supply and demand countries show a corresponding development. Taken as a whole it rises fairly uniformly from 1926 to 1933. In 1926 it amounts to 3.10 gold francs per 100 eggs (demand less supply price), and in 1933 to 4.33 gold francs. This margin increases from 1926 to 1928 from 3.10 to 3.60 gold francs, *i. e.*, about 20 per cent., keeps at about the same level till 1931, rising sharply by 1932 to 4.69 gold francs and again slowly falling by 1933 to 4.33 gold francs.

Turning in Table I to section (*d*) which shows the imports of the six markets selected out of the countries indicated in the note to Table I, we see that the imports of these countries taken together rise by about 25 per cent. from 1926 to 1928, *viz.* from 2,100,000 to 2,619,000 quintals. Although dropping to 2,468,000 quintals, the total import of the markets maintained approximately this level in 1931. There was a sharp fall from 1931 to 1933, *viz.*, from 2,468,000 in 1931 to 1,607,000 quintals in 1933.

The differences between supply and demand prices, or the price margins, have thus developed as already stated up to 1931 similarly. From 1931 to 1933 a sharp rise took place, to 4.69 in 1932 and to 4.33 gold francs in 1933.

From 1931 to 1933 accordingly the price margins and the imports show directly opposed tendencies. As stated at the beginning of this article, if the simplest trading principles can find expression equally in the quite free economic system as in the tariff restricted, they lose this effect with a clearing system. And this latter system has to be reckoned with increasingly since 1931.

It is Czechoslovakia that provides the most interesting example for the supply destroying effect of the clearing system which has mainly arisen out of the difficulties of the international course of payments. Czechoslovakia imported from 1926 up to and including 1931 eggs in the shell almost exclusively from Poland to the extent of between 90 and 96 per cent. of the total imports. In 1932 and 1933 this main exporter was supplemented by Rumania, Hungary, Bulgaria, Lithuania, Denmark and Yugoslavia. In 1932 Poland still took the lead with 85 per cent. of the egg market of Czechoslovakia, while in 1933 its share was only 5 per cent. At the same time it may be noted that the price margin between Poland and Czechoslovakia increased from 1932 to 1933 from 3.49 to 4.18 gold francs per 100 eggs, while, for example, the price margin of Czechoslovakia in relation to Denmark with a doubled import in 1933 as compared with 1932 increased only from 3.29 to 4.03 gold francs, and thus still remained somewhat more unfavourable than in respect of Poland.

The years from 1932 may thus for our purposes be regarded as abnormal, speaking generally, since under pressure of the various emergency measures the original motive forces of international trade had become ineffective.

In this general survey of the effect of the changes in the international price level on the transactions effected on important sections of the world market for eggs in the shell, the separate occurrences on the individual markets and

in the export countries concerned are shown as average results. The opposing single tendencies have frequently thereby balanced each other, or events of peculiar importance have affected the whole on one side or the other.

The situation for the single markets and the individual exporting countries may now be considered separately, so far as allowed by the available statistical material.

For the *German* market it is possible to submit to a closer examination six countries which export eggs into Germany, *viz.*, Netherlands, Belgium, Denmark, Sweden, Poland and Italy. These six countries cover about 65 per cent. of the demand of the German market in the selected period from 1926 to 1933.

On Table II the following items appear:

2 (*a*) The prices for 100 eggs, annual average prices for medium quality for the six above mentioned countries and Germany, in gold francs.

2 (*b*) The difference of the egg prices of the six countries indicated as compared with Germany, in gold francs.

2 (*c*) The total egg import of Germany from the six countries indicated and the egg import of Germany from each of the countries.

The effects of the changes of the international price level between Germany and the exporting countries in question on the German imports from those countries may now be examined.

In the first place there may be considered the whole situation on the German market for eggs in the shell.

The movement of prices for eggs in Germany (German fresh eggs, 59-62 gr., wholesale) took the following course in gold francs (Table II (*a*) Col. 1): 1926, 16.79 gold francs, then a decline to 15.84 gold francs by 1928, in 1929 the highest price of the period with 17.55 gold francs for 100 eggs, in 1930 a steeper decline to 14.45 gold francs, further fall of prices to 9.87 gold francs by 1932, and slow rise in 1933 to 11.10 per 100.

On the other hand taking the arithmetic mean of the supply prices of the comparable countries (Table II (*a*), Col. 8) the development is as follows: 1926 highest price with 14.31 gold francs per 100 eggs, falling to 13.39 gold francs by 1928, in 1929 rise to 13.94 gold francs, then including 1930 a sharp fall to 6.61 in 1933. The market conditions in 1928-29, which caused the prices to rise so high in the demand countries, so that in 1929 the highest price for the period 1926-33 was noted, did not have so marked an effect in the countries of supply, although a fresh rise of the average price level of the supplies was stimulated thereby.

The average price margin between the gold franc prices of the supply and demand has had a corresponding development. It falls from 2.48 gold francs 1926 to 1.87 gold francs 1927, then rises to 3.61 by 1929, falls again to 2.37 by 1931, and again rises to 4.49 gold francs by 1933. (Table II (*b*) Column 8).

The imports of the German market from the export countries here considered have developed precisely as the price margins, except that the decline of the price margin from 1926 to 1927 had no effect and that the year 1933, as an abnormal year under the influence of the clearing agreement, took a course contrary to the development of the price margin. The imports of the German market

Table II

(a) *Supply and Demand Prices on the German Market in gold francs per 100 eggs*

Years	Demand Price in Germany	Supply Prices						Arithmetic mean of supply prices
		Netherlands	Belgium	Denmark	Sweden	Poland	Italy	
	1	2	3	4	5	6	7	8
1926	16 79	13 58	14 52	14 75	13 94	—	14 78	14 31
1927	15 98	13 32	14 33	14 06	13 06	—	15 86	14 11
1928	15 84	12 72	14 28	13 75	13 22	10 40	15 94	13 39
1929	17 55	13 31	15 26	13 89	13 30	11 58	16 28	13 94
1930	14 45	10 65	13 29	11 44	10 78	8 62	13 19	11 33
1931	11 68	9 33	10 62	8 52	8 59	6 96	11 82	9 31
1932	9 87	6 52	8 17	6 05	5 71	5 85	10 11	7 07
1933	11 10	—	7 49	5 13	5 07	4 98	10 96	6 61

(b) *Margins between Supply and Demand Prices*

Years	Germany	Netherlands	Belgium	Denmark	Sweden	Poland	Italy	Averages of price margins
	1	2	3	4	5	6	7	8
1926	± 0 00	— 3 21	— 2 27	— 2 04	— 2 85	—	— 2 01	2 48
1927	± 0 00	— 2 66	1 65	— 1 92	2 92	—	0 12	— 1 87
1928	± 0 00	— 3 12	1 56	— 2 09	— 2 62	— 5 44	+ 0 10	— 2 45
1929	± 0 00	— 4 24	— 2 29	3 66	— 4 25	5 97	— 1 27	— 3 61
1930	± 0 00	— 3 80	1 16	— 3 01	3 67	— 5 83	1 26	3 12
1931	± 0 00	— 2 35	— 1 06	— 3 16	— 3 09	4 72	+ 0 14	2 37
1932	± 0 00	— 3 35	— 1 70	— 3 82	— 4 16	— 4 02	+ 0 24	— 2 80
1933	± 0 00		— 3 71	— 6 97	— 6 03	6 12	— 0 14	4 49

(c) *Imports on the German Market from Supply Countries in thousands of quintals*

Years	Total of imports into Germany from	Netherlands	Belgium	Denmark	Sweden	Poland	Italy
	1	2	3	4	5	6	7
1926	825	313	44	102	2	233	131
1927	861	387	89	119	4	178	84
1928	883	424	141	131	3	96	58
1929	966	476	193	110	14	99	74
1930	868	473	123	79	16	116	61
1931	740	468	70	88	11	39	64
1932	970	537	163	204	21	24	21
1933	597	337	44	152	20	40	4

from the export countries here considered rose from 825,000 quintals eggs in 1926 to 966,000 in 1929, *i. e.*, by about 17 per cent. while the price margin in the same years rose from 2.48 to 3.61 gold francs, or by some 45 per cent., then similarly to the price margin the imports fell from 966,000 quintals in 1929 to 740,000 by 1931, a fall of about 20 per cent., while the price margin in the same time fell from 3.61 gold francs in 1929 to 2.37 in 1931, thus by about 30 per cent. From 1931 to 1932 the price margin improved from 2.37 to 2.80 gold francs, thus by 18 per cent., to which there corresponds an increase of imports from 740,000 to 970,000 quintals, or a percentage increase of some 30 per cent.

In regard to the comparison made here of the percentage values of the separate movements of the price margins and of the imports, it must be recognised that a fairly far reaching correspondence exists between them. Returning to our introductory consideration by which the simplest general trading principles were recognised to be applicable also for international trade in commodities, it may be said that the extent of the price margin on the German egg market, has a certain influence corresponding fairly closely to the movements of the price margin, on the extent of the business done. This influence continues as long as the international trade in commodities is not regulated by the clearing system or by any other than purely trading principles. For the individual exporting countries and their deliveries on the German market these interactions must now be traced in detail.

In the case of the *Netherlands* the decline of the price margin from 1926 to 1927 does not run parallel to the decline of the exports to Germany; these latter are higher by about 24 per cent. Taking into consideration, however, the whole period from 1926 to 1929, there corresponds to a rise in the price margin from 1926 with 3.21 gold francs to 4.24 gold francs in 1929, or a rise of about 30 per cent., an increase in the egg exports of the Netherlands to Germany from 313,000 quintals in 1926 to 476,000 in 1929, or about 50 per cent. The recurrent decline of the price margin from 4.24 gold granes in 1929 to 2.35 in 1931, or by 45 per cent., has no such marked effect, but merely involves a reduction of the egg imports from 476,000 quintals in 1929 to 468,000 in 1931, a reduction of some 2 per cent. Similarly the rise that set in of the price margin from 2.35 gold fr. in 1931 to 3.35 in 1932, or a 40 per cent. rise, brought with it an increase of 15 per cent. only in the egg exports from the Netherlands to Germany; the rise in volume being from 468,000 quintals in 1931 to 537,000 in 1932. The year 1933 must here be left out of consideration for the reasons already given.

Apart from the movements of the year 1927, it may be established that a rising movement of the margin between the prices of eggs in the Netherlands and those in Germany is followed by increase in exports from the Netherlands into Germany, although expressed as percentages, these tendencies do not appear so much alike as it was found possible to show previously in the examination of the average figures of several exporting countries.

In *Belgium* the price margin remains taken from 1926 to 1929 at almost the same level, and in spite of a sharp rise in egg exports into Germany which in this space of time more than quadrupled. If 1927 is taken as starting point and the development compared up to 1929, the picture become markedly clearer. To a rise in the price margin in these years from 1.65 gold fr. to 2.29, or about 40 per cent., there corresponds an increase in the exports from Belgium to Germany from 89,000 quintals in 1927 to 193,000 in 1929, or about 115 per cent. This is followed for Belgium by a decline in the price margin from 2.29 gold fr. in 1929 to 1.06 in 1931, or a decline of 55 per cent., to which corresponds a decline in the volume of exports to Germany from 193,000 quintals in 1929 to 70,000 in 1931, or by 65 per cent. From 1931 to 1932 there follows a rise in the price margin from 1.06 gold fr. in 1931 to 1.70 in 1932, or by 60 per cent., which is accompanied by an increase in egg exports of Belgium to Germany from 70,000 quintals in 1931 to 163,000 in 1932, that is to say, one of about 130 per cent. The year 1933 is here also left out of consideration.

The development of the egg exports of *Denmark* into Germany is not so fully explicable, as was the case in the Netherlands and Belgium, from the trends of the price margins. None the less the trend from 1929 to 1930 is instructive, when the price margin fell from 4.66 to 3.01 gold francs, or by about 35 per cent., and the volume of exports from 110,000 to 79,000 quintals or by about 30 per cent. This was followed by an increase up to 1932, the price margin rising from 3.01 to 3.82 gold francs in the two years, *i. e.*, by about 25 per cent., while the Danish exports increased from 79,000 to 204,000 quintals *i. e.*, by two and a half times.

For *Sweden* the items are comparable only from 1929, because only from that year has there been any export worth mention from Sweden into Germany. The price margin rose from 4.25 gold francs in 1929 to 4.67 in 1930, or by about 10 per cent., and the Swedish egg export into Germany from 14,000 quintals in 1929 to 16,000 quintals in 1930, or by about 15 per cent. From 1930 to 1931 the price margin again fell from 4.67 to 3.09 gold francs, *i. e.*, by about 35 per cent., and there was a shrinkage of exports into Germany from 16,000 quintals in 1930 to 11,000 in 1931, *i. e.*, by about 30 per cent. From 1931 to 1932 there was again a marked rise in the price margin, *viz.*, from 3.09 to 4.16 gold francs, or about 35 per cent., while the Swedish exports into Germany increased from 11,000 quintals in 1931 to 21,000 in 1932, or by about 90 per cent.

For *Poland*, where the prices are not available for the years 1926 and 1927, a fairly uniform export into Germany may be established for the years 1928, 1929, and 1930, along with a price margin which is almost constant. The price margin figures are: for 1928, 5.44, for 1929, 5.97 and for 1930 5.83 gold francs, while the exports into Germany run as follows: 1928, 96,000 quintals, 1929, 99,000 quintals and 1930, 116,000 quintals. From 1930 to 1931 the price margin falls from 5.83 to 4.72 gold francs, or by 20 per cent., while the Polish egg export into Germany

declined from 116,000 quintals in 1930 to 39,000 in 1931, *i. e.*, by about 65 per cent. A still further reduction in the Polish exports to Germany was the result of the subsequent fall in the price margin, *viz.*, from 4.72 gold francs in 1931 to 4.02 in 1932, or by 15 per cent., the exports declining afresh from 39,000 quintals in 1931 to 24,000 in 1932, or by 40 per cent.

In respect of egg exports from *Italy* into Germany, there is no recognisable parallelism between trends of price margins and of exports. This may be connected with the fact that Italy was in that period both an importing and an exporting country for eggs in the shell. It may however be unconditionally stated that the complete disappearance of the price margin between the Italian and the German egg prices from 1931 onwards and the change to a negative position greatly diminished the egg export from Italy to Germany in 1932 and in 1933 almost completely extinguished it.

Summarising it may be said with reference to the influence which the price margin on the German market exercises on the imports into Germany from the principal countries of supply, that, taken as a whole, price margins and imports to a striking degree run parallel, and that on a review of the separate countries similar trends may be established in a large number of cases, while some cases stand outside the investigation.

Egg prices in *Great Britain* weakened somewhat from 1926 to 1927, *viz.*, from 22.05 gold francs the 100 eggs (British eggs, home price level) to 21,00 gold francs, subsequently rising from 21.21 gold francs in 1928 to 23.10 in 1929, and falling sharply till in 1933 the price of 10.39 gold francs was reached, or 45 per cent. of the 1929 price.

The export prices, taking the average of the countries: Irish Free State, Belgium, Netherlands, Denmark, Italy and France, have shown the following course· 1926, 14.41 gold francs for 100 eggs, 1929 15.30, thus a rise, followed however by a marked decline till in 1933 the price stood at 8.62 gold francs, or about 55 per cent. of the 1929 position. The export prices have thus proved more stable than the prices in the importing countries. This fact finds clear expression in the course of the price margin especially for the years from 1931. Up to and including 1930 the price margin is maintained at a certain height, varying between 6.24 gold francs in 1927 and 7.80, in 1929. From 1931 it underwent very marked reduction, to 4.75 gold francs in 1932 and finally to 1.77 gold francs in 1933.

The reaction of this movement of the price margin on the egg market of Great Britain also set in thus with the year 1931, while for the years up to 1930 no recognisable connections can be noted in respect of the trend as a whole. Thus from 1930 to 1931 the price margin fell from 6.65 gold francs to 4.75, or by 30 per cent., while the exports of the countries here reviewed hardly decline by as much as 1 per cent. On the other hand from 1931 to 1932 the price margin diminishes from 4.75 gold francs to 2.65 or by 45 per cent., and the exports of the six exporting countries into Great Britain fall from 1,362,000 quintals to 1,001,000, or by 27 per cent. The further decline of the price margin

Table III.

(*a*) *Supply and Demand Prices on the British Market in gold francs per* 100 *eggs.*

Years	Demand Price in Great Britain	Supply Prices						Arithmetic mean of supply price
		Irish Free State	Belgium	Nether-lands	Denmark	Italy	France	
	1	2	3	4	5	6	7	8
1926	22.05	16.48	14.52	13.58	14.75	14.78	12.34	14.41
1927	21.00	15.75	14.33	13.32	14.06	15.86	15.10	14.76
1928	21.21	15.65	14.28	12.72	13.75	15.94	15.38	14.62
1929	23.10	16.70	15.26	13.31	13.89	16.28	16.36	15.30
1930	19.48	13.96	13.29	10.65	11.44	13.19	14.44	12.83
1931	15.60	11.50	10.62	9.33	8.52	11.82	13.31	10.85
1932	11.25	7.88	8.17	6.52	6.05	10.11	12.84	8.60
1933	10.39	—	7.49	—	5.13	10.96	11.45	8.62

(*b*) *Margins between Supply and Demand Prices.*

Years	Great Britain	Irish Free State	Belgium	Nether-lands	Denmark	Italy	France	Averages of the price margins
	1	2	3	4	5	6	7	8
1926	± 0.00	— 5.57	— 7.53	— 8.47	— 7.30	— 7.27	— 9.71	— 7.64
1927	± 0.00	— 5.25	— 7.67	— 7.68	— 6.94	— 5.14	— 5.90	— 6.24
1928	± 0.00	— 5.56	— 6.93	— 8.49	— 7.46	— 5.27	— 5.83	— 6.59
1929	± 0.00	6.40	— 7.84	— 9.79	— 9.21	— 6.82	— 6.74	— 7.80
1930	± 0.00	— 5.52	— 6.19	— 8.83	— 8.04	— 6.29	— 5.04	— 6.65
1931	± 0.00	— 4.10	— 4.98	— 6.27	— 7.18	— 3.58	2.29	— 4.75
1932	± 0.00	— 3.37	— 3.18	— 4.73	— 5.20	— 1.14	+ 1.59	— 2.65
1933	+ 0.00	—	— 2.90	—	— 5.26	+ 0.57	+ 1.06	— 1.77

(*c*) *Imports on the British Market from the Supply Countries in thousands of quintals.*

Years	Total of imports into Great Britain from	Irish Free State	Belgium	Netherlands	Denmark	Italy	France
	1	2	3	4	5	6	7
1926	1,108	332	146	149	422	15	44
1927	1,182	379	161	177	426	7	32
1928	1,338	388	218	204	400	4	124
1929	1,321	376	222	238	418	2	65
1930	1,369	359	175	276	505	5	49
1931	1,361	343	155	288	566	2	7
1932	1,001	296	119	105	479	—*	1
1933	835	258	34	75	468		—

from 2.65 gold francs in 1932 to 1.77 in 1933, or by about 30 per cent., is accompanied by a decline of these exports to Great Britain of 1,001,000 quintals to 835,000, thus by about 17 per cent. In the case of Great Britain the year 1933 may be included here, since the British market in 1933 was still a tariff limited market only in the sense of our introductory observations.

As regards the countries exporting eggs into Great Britains the following are the data:

For the *Irish Free State* the price margin rises from 5.57 gold franc in 1926 to 6.40 in 1929, *i.e.*, by about 15 per cent., while the Irish exports into Great Britain increase from 332,000 quintals to 376,000, thus by about 15 per cent. From 1929 to 1930 the price margin falls from 6.40 gold francs to 5.52, or by about 15 per cent., and the exports of the Irish Free State of eggs in the shell to Great Britain fall from 376,000 quintals to 359,000, thus by about 5 per cent. Then the price margin from 1930 to 1931 declines further from 5.52 gold francs to 4.10 gold francs, that is by about 25 per cent., and the exports from 359,000 quintals to 343,000, thus by some 5 per cent. From 1931 to 1932 the price margin fell further from 4.10 to 3.37 gold francs., *i. e.*, by about 20 per cent., an event accompanied by a diminution of exports into Great Britain from 343,000 quintals in 1931 to 296,000 in 1932, or by about 15 per cent. Unfortunately the corresponding data for 1933 are not yet available, so that this year must remain out of consideration.

In *Belgium* along with a slight rise in the price margin from 7.53 gold francs in 1926 to 7.84 gold francs in 1929 there is a fairly considerable increase of egg exports to Great Britain, *viz.*, from 146,000 quintals in 1926 to 222,000 in 1929, thus by about 50 per cent. This was followed from 1929 to 1930 by a decline in the price margin from 7.84 gold francs to 6.19, *i. e.*, by about 20 per cent., to which there corresponds a decline in exports from 222,000 quintals in 1929 to 175,000 in 1930, also equivalent to about 20 per cent. From 1930 to 1931 the price margin falls further from 6.19 gold francs to 4.98, or again by 20 per cent., while the exports of Belgium to Great Britain decline from 175,000 quintals in 1930 to 155,000 in 1931, thus by about 12 per cent. Also from 1931 to 1932 the price margin falls from 4.98 gold francs to 3.18, *i. e.*, by 35 per cent., while the Belgian exports to Great Britain diminish from 155,000 quintals in 1931 to 119,000 in 1932, *i. e.*, by about 25 per cent. From 1932 to 1933 the price margin shrinks for Belgium from 3.18 gold francs to 2.90, thus by about 10 per cent., while on the other hand the Belgian exports to Great Britain decline from 119,000 quintals in 1932 to 34,000 in 1933, or by about 70 per cent. This sharp decline in the Belgian egg export from 1932 to 1933 is due also to other reasons than that of the difference in level between the Belgian and the British prices for eggs in the shell, and may be due in the main to the " currency competition " of Denmark, which is to be investigated later in connection with the discussion of the Danish egg exports to Great Britain.

Up to the years 1931 to 1933 very detailed correspondences may be noted in the trends of the price margin and the exports from Belgium into Great Britain.

The *Netherlands* show from 1926 to 1931 a steadily rising egg export into Great Britain, increasing in these years from 149,000 quintals in 1926 to 288,000 in 1931. The price margin for the Netherlands stood in the years 1926 to 1930 at a very high level, between 7.68 gold francs in 1927 and 9.79 in 1930, and falls then, on the further increase in the exports into Great Britain, till in 1931 it stood at 6.27 gold francs. From 1931 to 1932 the price margin diminished further from 6.27 gold francs in 4.73, thus by about 25 per cent., while the exports to Great Britain declined from about 288,000 quintals in 1931 to 105,000 in 1932, thus by about 65 per cent. The egg exports of the Netherlands to Great Britain fall still further till in 1933 they reach 75,000 quintals. It is unfortunate that for 1933 no Netherlands internal price quotations were yet available. For the Netherlands the officially quoted price for " export eggs " cannot here be applied, because it includes a kind of export premium and so is not the price with which the Netherlands actually comes into competition with the other countries. Taking as a basis the Netherlands export prices for eggs, the prices for Netherlands eggs, apart from duty, are somewhat higher than for example the prices in Germany, and also those in Great Britain in most years.

In the case of *Denmark* the development of the price margin and the exports to Great Britain is of interest, and also the relation of the price margin for Denmark to those of its keenest competitors on the British market, namely to the price margins of Belgium and the Netherlands. In spite of wide fluctuations in its own price margin, which rose from 7.30 gold francs in 1926 to 9.21 gold francs in 1929, and then again fell to 5.26 gold francs in 1933, Denmark was in a position to increase its egg exports to Great Britain from 1926 to 1931 almost uninterruptedly—there being on 1928 only a slight decline—the figures being 422,000 quintals in 1926 and 566,000 in 1931. From 1931 to 1932 the price margin for Denmark fell from 7.18 gold francs to 5.20 gold francs, thus by about 30 per cent., and the exports to Great Britain diminished from 566,000 quintals in 1931 to 479,000 in 1932, thus by about 15 per cent. From 1932 to 1933 the price margin rose slightly from 5.20 to 5.26 gold francs, while the exports from Denmark to Great Britain weakened somewhat from 479,000 quintals in 1932 to 468,000 in 1933.

An instructive comparison may be made of the reaction of the Danish price situation for eggs on the two competing countries, Belgium and the Netherlands. This is most clearly recognised from the course of the index numbers for the price margins on the one hand, and the exports of these countries into Great Britain on the other, stated on page 146 with 1926 = 100.

While the price margin for Denmark declined by 29 per cent. from 1926 to 1932 the percentage of diminution for Belgium was 58 and that for the Netherlands 44. In consequence Denmark was able to increase egg exports into Great Britain by 14 per cent. while from 1926 to 1932 the egg export from Belgium was reduced by 18 per cent., and that from the Netherlands by 29 per cent. In 1933 the position of Belgium is still worse, the egg exports to Great Britain have fallen away to 23 per cent. of the 1926 position, and in the same way the egg exports of the Netherlands have dropped to 51 per cent. of the 1926

position. Denmark has thereby been enabled to secure a considerable start of Belgium and the Netherlands, an advantage probably mainly due to the fact that the Danish crown has followed the English pound, and that thereby Denmark could maintain a more favourable position in respect to Great Britain than was possible for the gold standard countries of Belgium and the Netherlands.

Index Numbers of the Price Margins (1926 = 100).

Years	Denmark	Belgium	Netherlands
1926	100	100	100
1927	95	102	91
1928	102	92	100
1929	126	104	116
1930	110	82	104
1931	98	66	74
1932	71	42	56
1933	72	39	–

Index Numbers of the Egg Exports to Great Britain (1926 = 100).

Years	Denmark	Belgium	Netherlands
1926	100	100	100
1927	101	110	119
1928	95	150	137
1929	99	153	160
1930	120	120	185
1931	134	107	193
1932	114	82	71
1933	111	23	51

For *Italy* the position may be stated as follows The price margin was at its highest in 1926 with 7.27 gold francs, and this was also the year in which Italian exports of eggs to Great Britain over the period 1926 to 1933 stood highest, 15,000 quintals From 1926 to 1927 the price margin fell to 5 15 gold francs, *i. e.*, by 30 per cent , while the Italian egg exports to Great Britain declined from 15,000 quintals in 1926 to 7,000 in 1927, a decline of 55 per cent. From 1927 to 1929 the price margin rose somewhat, from 5 14 to 6.82 gold francs, while the exports diminished fairly considerably. As regards the course of Italian egg exports into Great Britain, it may be noted generally that in the first place the development was never so marked as in other countries, and that in the second place the complete disappearance of a price margin by 1933, or the change into a negative price margin, brought the Italian export trade in eggs with Great Britain virtually to an end even as early as 1932

A similar picture is presented by the egg export from *France* into Great Britain So long as the price margin for France could be maintained at a certain height, which was the case from 1926 to 1930 inclusive, the egg exports of France to Great

Britain were still extensive. From 1930 to 1931 however the price margin fell from 5.04 to 2.29 gold francs, thus by about 55 per cent., and the exports into Great Britain declined from 49 000 quintals in 1930 to 7 000 in 1931, thus by more than 85 per cent. In 1933 with a negative price margin of 1.06 gold francs per 100 eggs, there was no longer an egg export from France into Great Britain

Summarising it may be said of the British market that also on this market it is possible to recognise the influencing of the imports, both as a whole and in respect of the separate countries of supply, by the extent and the development of the price margin, or by the changes in the international price level. Moroever certain competition trends on the British market, as could be shown for Denmark, Belgium and the Netherlands, may be explained by an enquiry on the basis as adopted here

For *Switzerland* the Swiss egg market (Table IV) the prices from 1926 to 1929 slowly rose from 22.30 to 23.00 gold francs per 100 (fresh country eggs in towns and foreign places) From 1929 to 1933 however prices fell considerably and in 1933 reached 14 gold francs per 100 at a position which was some 40 per cent. lower than that of 1926 The prices of the supply which it is here possible to investigate, that is to say the countries of France, Italy, Belgium, Netherlands and Poland, went slowly up from 13.81 gold francs in 1926 to 14.52, and then fell until 1933 to 8.72, or compared with 1926 a percentage rise of about 35 per cent. The price development of the price margin has been in correspondence. From 1926 to 1929 it remained at nearly the same level although with fluctuations (8 49 gold francs in 1926, 8 48 in 1929), and till 1933 fell to 5.28 gold francs, *i. e.*, about 40 per cent. Swiss imports of eggs in the shell to the countries here reviewed rose from 56,000 quintals in 1926 to 69,000 in 1929, *i. e.*, by about 20 per cent., and then sank till in 1933 they were 39,000 quintals, or as compared with 1929 a decline of some 45 per cent. A very similar movement of the development of the price margin occurred from 1929 to 1933.

TABLE IV.

(*a*) *Supply and Demand Prices on the Swiss Market in gold francs per 100 eggs.*

Years	Demand Price in Switzerland	Supply Prices					Arithmetic mean of supply prices
		France	Italy	Belgium	Netherlands	Poland	
	1	2	3	4	5	6	7
1926 . . .	22.30	12.34	14.78	14.52	13.58		13.81
1927	22.30	15.10	15.86	14.33	13.32		14.64
1928	22.00	15.38	15.94	14.28	12.72	10.40	13.74
1929	23.00	16.36	16.28	15.26	13.31	11.58	14.52
1930	20.00	14.44	13.19	13.29	10.65	8.62	12.04
1931 . .	19.00	13.31	11.82	10.62	9.33	6.96	10.41
1932	16.00	12.84	10.11	8.17	6.52	5.85	8.70
1933	14.00	11.45	10.96	7.40	—	4.98	8.72

(*b*) *Margins between Supply and Demand Prices.*

Years	Switzerland	France	Italy	Belgium	Netherlands	Poland	Averages of the price margins
	1	2	3	4	5	6	7
1926	± 0.00	— 9.96	— 7.52	— 7.78	— 8.72	—	— 8.49
1927.	± 0.00	— 7.20	— 6.44	— 7.97	— 8.98	—	— 7.66
1928	± 0.00	— 6.62	— 6.06	— 7.72	— 9.28	— 11.60	— 8.26
1929.	± 0.00	— 7.64	— 7.72	— 7.74	— 9.69	— 11.42	— 8.48
1930.	± 0.00	— 5.56	— 6.81	— 6.71	— 9.35	— 11.38	— 7.96
1931	± 0.00	— 5.69	— 7.18	— 8.38	— 8.67	— 12.04	— 8.59
1932.	± 0.00	— 3.16	— 6.89	— 7.83	— 9.48	— 10.15	— 7.30
1933.	± 0.00	— 2.55	— 3.04	— 6.51	—	— 9.02	— 5.28

(*c*) *Imports on the Swiss Market*
from the Supply Countries in thousands of quintals.

Years	Total imports into Switzerland from	France	Italy	Belgium	Netherlands	Poland
	1	2	3	4	5	6
1926	56	10	40		—	6
1927	58	10	23	5	2	18
1928	67	20	22	9	1	15
1929	69	19	21	14	1	14
1930	71	20	23	14	1	13
1931	71	14	27	16	4	10
1932	81	7	23	33	6	12
1933	39	4	7	17	4	7

In respect of egg exports from *France* to Switzerland no correspondence can be traced for the years 1926 to 1931 of the trend of the price margin and of the volume of exports. None the less the decline in the price margin from 5.69 gold francs in 1931 to 3.16 in 1932, or approximately a 45 per cent. decline, was accompanied by a drop in the French egg exports into Switzerland from 14,000 quintals to 7,000, or by 50 per cent. Similarly to a further decline in the price margin from 3.16 gold francs in 1932 to 2.55 in 1933, or a decline of 20 per cent., there corresponds a decline in exports from 7,000 quintals to 4,000, or by about 45 per cent.

For *Italy* the price margin remained from 1926 to 1932 at much the same height, between 6.44 gold francs in 1927 and 7.72 in 1929, and the Italian exports vary, leaving out of count a relatively large volume in 1926 (40,000 quintals), between 21,000 quintals in 1929 and 27,000 quintals in 1931. From 1932 to 1933 the price margin falls very abruptly, from 6.89 gold francs in 1932 to 3.04

in 1933, a fall of about 60 per cent. This was accompanied by a decline in Italian egg exports into Switzerland from 23,000 quintals in 1932 to 7,000 in 1933, or a decline of nearly 70 per cent.

For *Belgium* the price margin was on the whole maintained from 1926 to 1932, with fluctuations between 6.71 gold francs in 1930 and 8.38 in 1931. No linkage of the trend of the price margin and of the exports into Switzerland is recognisable, as the exports steadily increased from 5,000 quintals in 1927 to 33,000 in 1932. From 1932 to 1933 the price margin fell from 7.83 to 6.51 gold francs, or by 17 per cent, while the Belgian exports into Switzerland declined from 33,000 quintals in 1932 to 17,000 in 1933, a decline of nearly 50 per cent.

In the case of the *Netherlands*, no correspondences can be established owing to the very small volume of exports into Switzerland, and the same is true of *Poland*.

In general it may be said in regard to the influence of the price margin on the imports on the Swiss market, that the process cannot be so clearly recognised as on other markets, but that here also some few typical parallel trends may be distinguished.

The process on the French market can here be only treated in general lines, because in the first place the separate exporting countries under review have entered the market with very small quantities only and because in the second place France was during the period partly an egg exporting and partly an egg importing country, and thus influences are at work which stand outside our enquiry. The price margin is negative in 1926, *i. e.*, the average prices of the supply countries are higher than the French quotation for eggs. From 1927 however the price margin has been positive; it amounted in 1927 to 0.60 gold francs for 100 eggs and by 1932 had reached 5.18 gold francs. The total exports from the exporting countries reviewed here: Belgium, Italy, Netherlands and Poland, are however very uneven. The position of the French egg market tends to appear far from clear from the fact that France imports in increasing proportion eggs in shell from Algiers and Morocco, and also from Turkey, countries which owing to absence of corresponding price statistics do not fall within the range of this enquiry.

Nearly the same may be said of the Spanish as of the French market. Here also considerable influence is exercised by countries from which no corresponding price statistics are available. Among these are prominent Turkey, Egypt and Morocco, including both the French and the Spanish zones, as also the international zone of Morocco.

The *Czechoslovakian* market up to 1931 was governed, as already stated by Polish imports. From 1928 to 1932 the price margin for Poland on the Czech market rose together with the exports from Poland. In spite of this

parallel rising tendency great differences appear in the effect of the changes in the price margin on Polish imports into Czechoslovakia. There is a correspondence between the rise in the price margin from 1928 to 1932 from 2 24 to 3.49 gold francs, or a rise of 55 per cent, and an increase in the Polish exports in those years from 40,000 to 125,000 quintals, or an increase of more than 300 per cent

Summarising it may be said in regard to the influence of the changes in international price level, that is, in the price margin, on the imports into the principal markets for eggs in the shell, that an indisputable dependence of imports of the markets, alike taken altogether and also in relation to the separate exporting countries of supply, results from the changes in international price level, that it is not however practicable in the first place to express this influence in terms of fixed relations, secondly it varies with the countries and thirdly through the prevalence of the clearing system of trade in the last few years this influence has markedly lost its significance, although the fundamental existence is in no way questioned

CURT KAPPSTEIN

AGRICULTURAL POLICY AND THE CRISIS IN POLAND

§ 1 — INTRODUCTION

Although the world agricultural crisis is everywhere due to the same general causes, it has given rise to a variety of problems in the separate countries The agricultural crisis in the different parts of the world thus presents a merely superficial appearance of uniformity and resemblance It is true that there is everywhere to be noted a decline in the prices of agricultural products as compared with the years preceding the present crisis It is also true that everywhere the conditions of the world agricultural market are seen to be reacting upon the situation of the market of a particular country Almost everywhere the same financial problems will be noted, the same difference between the very rapid fall of the prices of agricultural products and the much slower fall of the price levels of industrial products But within the limits of these general resemblances a surprising variety of local problems is noticeable together with a still wider variation in the methods adopted for their solution

In devoting these few pages to the agricultural policy of Poland as directed on the problems raised in that country by the world crisis, the writer has done so not merely with the object of detailing the methods that have been followed in Poland, but also because monographs of this kind may—with all proper reserves—supply conclusions that can be applied over a larger sphere than the territory of a single country In effect, if the aspect of the agricultural crisis in a given country differs in a certain measure from that of all the other countries, there are none the less some problems calling for general solution, which if not identical are at least alike. It can only be a gain to become

acquainted more fully with the results obtained by such and such a measure in agricultural policy, adopted in one or other country.

These few preliminary remarks are necessary as justification of the writer for devoting nearly half this article to the examination of the conditions of agricultural production in Poland before proceeding to the subject he has set himself However—and this in our opinion is quite clear after the reserves that have been made—it is impossible to speak of a policy of combatting the crisis, if the local conditions in which this policy is being pursued are not thoroughly understood; no image can be formed of the aim pursued by this policy if the problems that arise and the difficulties that make their appearance are not fully explored. To conclude, one more reserve. It is not proposed in this article to treat of the question of Polish agricultural policy except under its internal aspects. Subjects such as the Polish attempts to find international methods of combatting the agricultural crisis, an attempt which has however yielded very admirable results, will not be handled in the course of this article. This question, great as may be its interest, does not appear to fall within the limits of the subject here selected. While recognising its existence, it may be left deliberately out of consideration

§ 2. — The agricultural crisis in Poland.

A. *Economic Structure of the Country. Place of Agricultural Production.*

The importance of agricultural production for the economic life of Poland inheres in the simple fact that according to the last census the population directly engaged in agricultural production formed 72.3 per cent. of the vocationally active population of the country. To this percentage there should be added the number of persons engaged indirectly in agricultural production, in the first place in the subsidiary agricultural industries and in the organisation of the distribution of agricultural products. Such a correction of the percentage would result in a still higher ratio of the agricultural to the total population, *viz.*, about 76 to 78 per cent. This calculation might lead to the conclusion that Poland is a country with a purely agricultural structure, were it not for the fact that the value of the agricultural production is not more than about 45 per cent. of the value of its total production and that the exports of agricultural products amount only to 15 per cent. of the value of the total Polish exports. It is true that these figures have been calculated for the year 1933, *i. e.*, for a year when, in comparison with the years 1927-29, the fall of agricultural prices was much greater that that of the prices of industrial products, but on the other hand the level of agricultural prices was in 1927-29 about 15 per cent. higher—in relation to those of industrial products—than if a longer period, *e. g.*, 1923-33, had been taken as basis.

Thus, if on an occupational basis Poland may be said to have a distinctly agricultural character, on the basis of the value of its production this character is seen rather to be that of a country in a stage of transition. None the less it is the great mass of the agricultural population which actually represents the basis

of consumption of the products of industry in Poland, and the well-being of this mass determines in a very great measure the industrial activity of the country as well as the economic situation of the towns.

It may further be noted that there is a wide difference between the standard of living of the agricultural population and that of the urban dwellers, and that moreover the difference is equally marked between the standard of living of the agricultural population in the Western and Eastern parts of Poland respectively. Thus, while even a serious deterioration of economic conditions only slightly affects the consumption of certain commodities in the towns—since it is there that such commodities constitute prime necessities—the demand in the villages is much more elastic, and the variations in consumption by the rural population resulting from even superficial changes in the economic situation are disproportionately great. This is true in the first place of commodities such as clothing, coal, chemical fertilisers, and also of those for which there is a relatively fixed demand in the towns, such as sugar, tea, tobacco, salt. Any deterioration of economic conditions of agriculture in Poland is quickly accompanied by regression of the standards of living of the rural population towards the more primitive forms of natural economy.

This phenomenon is closely connected with the agrarian structure, especially with the preponderance of the medium-sized farm holding. In fact out of 3,262,000 rural holdings 3,056,000 were under 20 ha. in area while only 19,000 exceeded 100 ha. This problem is of special importance in regard to the consumption of commodities entering into the costs of agricultural production, such as farm machines, coal, fertilisers, bricks. While according to special monographic studies the consumption of these commodities has diminished on holdings exceeding 100 ha. by about 40 per cent. in the period 1929-32, the ratio is from 75 to 80 per cent on the holdings of less than 100 ha. in the same period.

These facts are here emphasised in order to bring out the importance of the economic conditions of the agricultural population for the situation of the whole country. This fact is of great importance for the policy of combatting the agricultural crisis, since it makes it possible to estimate the magnitude of the sacrifices which must be made in order to improve the position of agriculture and to establish an economic equilibrium in industry and in the other spheres of the economic activity of the country.

It seems opportune here to examine the structure of the production and of the trade in agricultural products as compared with that of industry. Now, in Poland there is found a great variety of forms alike of farm holdings and also in the organisations for distribution of agricultural products. Some statistical illustration has already been given of the structure of farm holdings and it is only necessary to add that the areas sown in the farms exceeding 50 hectares approach 2,913,000 ha., while the sown area on farms of under 50 hectares is 13,640,000 ha.. The agrarian structure of Poland is evidently thus not greatly concentrated. The same cannot be said, with few exceptions to be mentioned below, of the organisation of the distribution of agricultural products. In fact in the western districts of Poland the distribution of more than 60 per cent. of the wheat and of other crop products of a marketable nature is effected by means

of organised agricultural co-operative societies. In the centre of the country this percentage is about 30 per cent. less, and it falls to a very small ratio in the eastern districts. In these latter districts of Poland, which account for less than 40 per cent. of the production of the whole country, there is in fact no organisation of distribution, which is thus almost entirely in the hands of individual dealers. This fact is noted as constituting a factor of great importance for any policy of raising internal prices. The situation becomes even clearer in relation to the marketing of live stock products. Actually apart from the sale of pigs for bacon production and the sale of eggs, which are centralised, the former by the bacon producers and the latter by means of co-operative societies, live stock products are distributed by means of quite individual dealers, more particularly by the intermediary of a series of local and wholesale dealers. On the other hand the organisation of marketing of sugar beet is carried out by the refineries which are for the most part share companies the shares in which are held by the sugar beet growers themselves, and the refining companies fix the purchase prices in advance for a whole production season.

The distribution of agricultural products in Poland thus does not present any distinct general character. Almost every possible form of organisation is found, from a free market form up to a co-operative organisation, and even, in the case of sugar beet, an organisation resembling that of a cartel. In any case it may be remarked that in the conditions described, there exists no means of guiding price movements in any desired direction by the organisation of distribution of agricultural products, since an influence exercised by the existing organisations may always be conterbalanced by the volume of products reaching the market through the intermediary of individual dealers.

On the other hand, and this is a factor which has had an important influence on the programme of Polish agricultural policy in the course of recent years, the majority of the basic manufacturing industries are organised in the form of cartels The most important of these for agriculture may be noted here: that of coal, of cement, petrol oils, and those of the metallurgical industries, including iron, tin, zinc. Production of chemical fertilisers is centralised to the extent of 90 per cent. in the State factories. Thus, as will appear later, the price movement of the cartelised goods has been a factor of the first importance in the economic equilibrium between the purchasing power of the Polish village and industrial production, and the Polish policy has been especially concerned with this problem.

In concluding this account of the economic structure of Poland, or rather the very general description attempted here, some consideration should be given to the financial structure of the country. The most important features in this structure are shown in the following table:

The financial problem of Poland cannot be fully grasped apart from an understanding on the one hand of the effects of the war in arresting the process of internal capitalisation and on the other of the result of the inflation and devaluation of 1920-24, by which the country was deprived of floating capital. In fact want of floating capital resources is a very characteristic feature of the financial structure of Poland, and the effects of this want are clearly very serious in a time of crisis. Reconstruction of a wide financial basis, especially

by means of internal capitalisation, imposes extreme care in the sphere of the policy of short term credit. On the other hand, since there is little free capital on the market, it is impossible for the country to develop more fully the operations of long term credit.

TABLE I. — *Financial Structure of Poland.*

	1929	1930	1931	1932	1933
	(millions of zloty on 31 December)				
Deposits in share banks and in savings banks	2,694	3,039	2,686	2,723	2,743
Short term banking credits	2,691	2,787	2,209	1,888	1,857
Long term nortgage credits	1,292	1,490	1,681	1,729	1,540
Issues of mortgage credits in course of the year	241	253	189	76	2
	Annual averages				
Discount rate at share banks	12.2%	11.5%	10.9%	10.7%	9.4%
Discount rates at Bank of Poland	8.6%	7.2%	7.5%	7.2%	5.8%

Only the most characteristic features in the economic structure of Poland have been noted here and we have confined ourselves to emphasising only what is essential to the understanding of the important problems which are the result of the crisis in this country. It will now be possible to pass on to the questions more directly connected with the subject of this article.

B. *Agricultural Production and Internal Consumption of Farm Products.*

The problem of the relation between agricultural production and internal consumption is a factor of the first importance in regard to the methods which may be adopted for combatting the agricultural crisis in a single country. It in this factor which decides whether the establishment of a customs barrier is an adequate means of controlling price levels on the national market, or whether a deflation process is essential, which will allow costs of agricultural production to fall to the level of internal prices, influenced as these are by the level of world prices. This latter case is that of the exporting countries.

Before it is possible to review the methods of the Polish policy for meeting the agricultural crisis, a study has to be undertaken of the relations between Polish internal consumption and agricultural production.

The production of the main crop products in Poland is illustrated by Table II (page 155).

As appears clearly from Table II, there had been a very rapid increase in the period 1927-29 in Polish agricultural production, with the single exception of sugar beet, the production of which was regulated by the refineries, and in 1933 the lével of production was much higher than in 1927. This fact is due on the one hand to the disappearance of the results of the military opera-

tions, and on the other hand to the very high level reached by prices of farm products in the three years before the crisis, a level which had made possible the intensification of Polish agricultural production.

TABLE II. — *Production of the Principal Crop Products in Poland (million of quintals)*

Products	1927	1928	1929	1930	1931	1932	1933
Wheat	16.6	16.1	17.9	22.4	22.4	13.5	21.7
Rye	58.9	61.1	70.1	69.6	57.0	61.1	70.7
Barley	12.8	15.3	16.6	14.6	14.8	14.0	14.4
Oats	21.4	25.0	29.5	23.5	23.1	23.9	26.8
Potatoes	267.7	276.6	317.5	309.0	309.9	299.7	283.3
Sugarbeet	36.2	49.0	49.7	47.2	27.6	23.8	18.5

The extent of this increase in production is plainly illustrated by the figures given below:

TABLE III. — *Average Yield per hectare (according to the information given by the Agricultural Correspondents of the Central Statistical Office).*

Products	1926	1927	1928	1929	1930	1931	1932	1933
Wheat	11.6	13.0	13.9	14.1	15.2	13.5	10.8	13.4
Rye	10.4	11.6	13.5	13.6	13.8	11.5	11.3	11.9
Barley	12.6	13.2	15.3	15.0	13.5	13.2	12.9	13.4
Oats	11.7	13.0	14.7	16.0	12.7	13.1	13.0	13.7

In the sphere of stock farming a similar phenomenon of increase in the head of live stock is found:

TABLE IV. — *Numbers of Live Stock in Poland (in thousands).*

Live Stock	1929	1930	1931	1932	1933
Cattle	9,057	9,399	9,786	9,461	8,985
Pigs	4,829	6,047	4,321	5,844	5,753
Sheep	—	2,491	2,599	2,488	2,557

In face of this increase in production the internal consumption proved extremely inelastic in the course of the years of prosperity while it has shown very marked shrinkage during the years of crisis. The excess of exports over imports became a regular feature, although during the post-war years any such excess of exports had been as regards cereals—with the sole exception of barley—accidental in character.

TABLE V. — *Excess of Exports (+) or of Imports (—) of Crop Products in Poland (thousands of quintals).*

Products	1926/27	1927/28	1928/29	1929/30	1930/31	1931/32	1932/33
Wheat	— 2,100	— 2,240	— 666	— 20	+ 816	+ 624	— 138
Rye	— 433	— 965	+ 561	+ 3,299	+ 2,666	+ 1,874	+ 2,349
Barley	+ 903	+ 647	+ 1,863	+ 2,627	+ 1,269	+ 1,427	+ 1,137
Oats	— 360	— 142	— 43	+ 788	+ 62	+ 125	+ 164
Wheat Flour	— 68	— 74	— 1	+ 54	+ 268	+ 47	+ 3
Rye Flour	+ 21	— 6	+ 27	+ 108	+ 620	+ 386	+ 239

In the course of the years 1927-28 Poland became, in respect of cereals, an exporting country, although previously its character as such had not been clearly defined. It is true that in the course of the years 1932-34 it was only as a result of the efforts of the preceding years that the level of production could be maintained, seeing that the intensification process had come to an abrupt end in 1930 and that the consumption of fertilisers had fallen with extreme rapidity. It is also true that, with conditions of normal consumption of crop products on the internal market, Polish production in the course of the last three years would have been just adequate to cover Polish demand. It remains, however, none the less true that the improvement in conditions of production in agriculture, especially the closer correspondence between prices of commodities produced and those purchased by farmers, will act finally as a stimulus of agricultural production, by enabling the farms to consume larger quantities of artificial fertilisers. After having repaired the results of the war devastation, Poland became decidedly an exporting country of agricultural products, and this characteristic seems to be becoming a stable one for the years to come.

C. *Economic Conditions of Agricultural Production in Poland.*

Having examined the comparative volume of agricultural production in Poland, there remains to consider the question of values, and to conclude with a review of the conditions which have affected Polish agriculture in the course of the last four years.

In the first place the question arises of the prices of agricultural products in their relation to costs of production and to the indebtedness of farms. The fall of agricultural prices evidently becomes a factor of economic disequilibrium and affects the economic conditions of agricultural production, the more so that the simultaneous fall of the prices of commodities of rural consumption, of wages of farm workers, and of fiscal charges is less marked, while farm indebtedness becomes more onerous. A fall in prices of agricultural products accompanied by a proportional decline in all the factors constituting costs of production would lead only to passing and inconsiderable difficulties. In fact while the fall in prices of agricultural products is in itself due to disproportions between the production and consumption of these products on the world-market—a pro

blem the causes of which are too complicated to be considered here—the extent of the agricultural crisis in a particular country depends on the difference between the fall of agricultural prices and that of the costs of agricultural production.

The relation between the prices of agricultural products on the internal market of Poland and on the world market is shown on the following table:

TABLE VI. — *Prices of Cereals on the Polish Market and in Various Countries (zloty per 100 kg.).*

Wheat.

Years	Warsaw	Berlin	Prague	Hamburg c. i. f.	Chicago
1927	54.3	56.0	63.5	--	45.5
1928	52.6	49.7	57.3	48.3	43.3
1929	45.3	48.2	48.5	44.7	40.5
1930	35.8	54.6	44.3	34.8	31.9
1931	27.6	52.8	41.4	24.6	22.1
1932	27.4	48.7	41.7	21.5	17.5
1933	29.5	39.7	41.8	18.5	19.3

Rye.

Years	Warsaw	Berlin	Prague	Hamburg c. i. f.	Chicago
1927	43.7	52.8	60.2	—	37.4
1928	42.6	50.7	55.7	45.6	39.9
1929	29.6	40.8	38.6	38.7	36.4
1930	19.4	34.5	26.0	26.2	23.3
1931	23.9	38.7	36.0	16.9	13.7
1932	21.9	37.8	33.0	16.3	13.0
1933	17.2	32.0	22.9	11.8	15.5

Years	Barley			Oats			
	Warsaw	Berlin	Prague	Warsaw	Berlin	Prague	Chicago
1927	41.4	51.1	50.7	38.3	64.2	46.1	33.4
1928	43.2	52.2	55.4	42.2	48.0	48.8	38.9
1929	31.7	44.1	42.3	29.5	39.0	38.5	29.9
1930	25.5	41.2	36.1	20.6	32.5	27.5	24.8
1931	25.1	40.4	37.4	25.1	33.1	33.7	17.4
1932	21.0	37.9	26.2	20.9	31.2	24.9	12.9
1933	16.2	37.3	24.2	15.1	28.2	19.9	14.3

In contradistinction to what occurred on the internal markets of the greater number of the countries of Central Europe, the price level of Polish agricultural products before the crisis was, if not the same as at least very near to, that of the world market as shown in Table VI by the Chicago quotations and the c. i. f. prices at Hamburg. Also, in the course of the crisis, the price level of cereals on the Polish internal market had fallen—with the exception only of wheat, the production of which had barely covered the internal consumption in the

course of the last few years—proportionately to the fall of prices on the world markets. In 1933 the level of prices quoted at Warsaw, which were a little higher than the prices ruling on the other markets of the country, *e. g.*, at Poznan, was only slightly higher than the level of prices on the world markets. However, even this price level which is very close to the price level on the open markets could not be maintained, as regards rye, oats and barley, without intervention on the internal market and apart from a system of export premiums. This is clear since if the level of internal prices had to be adjusted to the world price level, it would be essential to take into consideration costs of transport from the Polish market to the importing countries, *i. e.*, the price would have to be about 5 or 6 *zloty* lower than the Hamburg quotations. Thus, cereal prices on the internal market, although lower than the quotations on the majority of the markets of Central Europe, were still higher than the price level which might have been established if the Polish market had remained quite open in respect of the world market.

The problem of the relation between the movement of agricultural prices on the Polish internal market, and that of agricultural prices on the world market and on some of the closed markets of Central Europe, has been treated here merely to show that cereal prices in Poland have followed, with the exception of wheat, the price movement on the world market and that their level has been about 25 to 40 per cent. higher than the world price level, which might have been established instead if the internal market had not been protected by a system of export premiums and by interventions in the sphere of demand.

It is now necessary to pass on to the essential problem of the agricultural crisis in Poland, *viz.*, the problem of the relation between the prices of agricultural products and the costs of production in agriculture. Partial illustration of this problem is to be found in the following table, including the price index-numbers of the products sold by the farms, of the commodities of rural consumption, and of the wages of regular farm workers. The table covers only a part of the problem, since it does not include the charge of farm indebtedness, nor the fiscal charges and those arising from social legislation, nor the prices of those commodities of rural consumption which are not direct costs of production, but nevertheless play an important part in the budgets of farming families.

TABLE VII. — *Price Movements of Commodities Sold and Purchased by Farmers and Wages of Farm Workers.*

(1928 = 100)

(a) *Products sold directly by farms.*

Year	Total	Crop Products	Live Stock Products	Dairy Products
1928	100	100	100	100
1929	89.5	75.5	100.5	98
1930	67.0	50.0	86.9	79.4
1931	59.5	57.7	56.7	70.1
1932	48.9	49.9	43.8	55.0
1933	42.6	41.1	42.5	46.7

(b) *Products purchased by the farmers.*

Years	Artificial fertilisers and manufactured goods for agricultural production
1928	100
1929	101.1
1930	98.6
1931	90.7
1932	81.4
1933	72.9

(c) *Wages paid to regular farm workers.*

Years	In terms of złoty	In terms of quintals of rye
1928-29	100	100
1929-30	70	112
1930-31	56	131
1931-32	62	106
1932-33	48	105

It would thus appear that in the course of the years 1929 and 1930 the price fall of commodities sold by the farmers had been much shareper than that of the purchased commodities which constitute the direct costs of agricultural production. Taking the year 1928 as 100, the difference between the price level of commodities purchased and sold by the farmers was:

11.6 per cent	. . . .	in 1929
31.0 » »	. . . .	» 1930
31.2 » »	. . . .	» 1931
32.5 » »	. . . .	» 1932
30.3 » »	. . . .	» 1933

While in 1933 the prices of commodities purchased by the farmers had fallen by 27.1 per cent. as compared with 1928, the price level of raw materials and of manufactured goods had fallen by 39.2 per cent. on an average; raw materials and goods manufactured by the cartelised industries, on the other hand, were subject to a fall of 9.1 per cent. only. Hence the divergence between the prices of products sold and bought by farmers was due to the stable price level of the products of the cartelised industries. The problem is of great importance for our enquiry since it is at the base of the national policy for combatting the crisis.

As already stated, apart from the commodities directly employed for agricultural production, the costs of agricultural production consist of such factors as fiscal charges, charges arising out of social legislation, and the interest on debts. Moreover, in the course of the years 1927 to 1929 the investments in agricultural production had become very large. According to estimates made investments in agricultural production have accounted for more than 40 per cent. of the investments made in the whole production of Poland, also they could not be amortised except in the course of a period of some decades. These investments included to a very large proportion the improvement of lands and buildings for which the

farmers had to obtain long term credits, but also a large proportion had gone into the mechanisation of farming. To cover this last outlay, agriculture had had the benefit in prosperous years of a generous short term credit, both trade and banking. The price levels of 1927, 1928 and even 1929 seemed to secure the possibility of amortisation of these investments within a short period.

In the course of the years 1927-29 and even 1930 a very rapid expansion of agricultural credit operations has been noticeable. The very abrupt fall of agricultural prices had by 1931 frozen a large part of the short term credits granted to the farms, the more so as they had been deprived of floating capital in the period of inflation, while in the period of prosperity the accelerated pace of investments, resulting from the large profits obtained from agricultural production, had not given scope for the development of a process of capitalisation among the farmers. In fact the percentage of bills not accepted at the banks had risen to 11.7 per cent. in 1930 and to 13.1 per cent. in 1931 of the total number of accepted bills.

The problem of indebtedness may be illustrated by some figures. Exact data are available only in respect of farms from 2 to 50 hectares in area. The indebtedness of these, taking 1926 as 100, had increased to 135.8 per cent. in 1927, to 182.2 per cent. in 1928, and to 220.4 per cent. in 1929. In general the indebtedness of the large estates had increased more slowly. The development of the financial situation of the farms of 2 to 50 hectares in the administrative area of Warsaw, to give merely an example of the general situation may be shown in the following manner:

TABLE VIII. — *Indebtedness in the Administrative Area of Warsaw* (1) (*zloty per hectare*).

Years	Number of farms	Assets złoty	Liabilities		Net Income złoty
			złoty	in % of assets	
1927	102	3,108	207	6.6	368
1928	102	3,938	265	6.7	281
1929	84	3,939	366	9.3	246
1930	66	3,476	380	10.9	139
1931	22	2,982	472	15.8	129

The net income includes also the value of the work done by the farmer himself and his family, and on deducting this value, a very small sum representing the money income of the farms per hectare would be reached. The situation became the more serious as the bankruptcies of the farms, involving a sale by auction of the farm itself, led, in view of the want of free capital in the country, to the complete devalorisation of a large section of the credits granted to agri-

(1) Results of an enquiry of the Department of the Economy of Small Farm Holdings. Summary by M. Antoniewski in " Rolnik Ekonomista, " 1934.

culture, and threatened the financial structure of the country. In 1931 cases of judiciary liquidations of farms, yielding to the creditors some 30 to 40 per cent. of the value of the debts, became almost a daily occurrence, although the ratio of the liabilities to the assets did not exceed, even in the cases of sale by auction, 40 to 50 per cent. on an average. The fact was that the absence of capital ready for investment in agricultural production lowered the prices of land below its value measured by the profits on production, and especially when the offers of land had become abnormally numerous by the fact of the increase in the number of liquidations of farms.

(*To be continued*). André JALOWIECKI.

HAIL INSURANCE IN YUGOSLAVIA

Private insurance against hail damage was operated in Yugoslavia in 1932 by the following societies:—

"Croatia" Co-operative Insurance Society, Zagreb.
"Dunav" Insurance Company Limited, Zagreb.
"Herceg-Bosna" General Insurance Company, Belgrade.
"Jugoslavija" General Insurance Company, Belgrade.
"Riunione Adriatica di Sicurtà," Trieste.
"Rossija-Foncière" Insurance and Reinsurance Company, Belgrade.
"Sava" General Insurance Company, Limited, Zagreb.
"Slavija" Yugoslavian Insurance Bank, Lubliana.
"Triglav" Insurance and Reinsurance Company, Zagreb (1).

In Yugoslavia there is an insurance Pool in existence: in 1932, 86 per cent. of the total proceeds of hail insurance business belonged to the companies grouped in the Pool; about 14 per cent. of the total proceeds belonged to the two societies, Croatia and Slavija, which took part in the convention but not in the clearing (2).

The special feature of interest in the organisation of hail insurance in Yugoslavia is that in this country compulsory hail insurance has been partially brought into force.

As early as 1895 a National Institute of Hail Insurance had been founded in Serbia with compulsion to insure, but this institution was ineffective on account of imperfect organisation and inadequate premiums (3).

In 1905 a progressive supertax was introduced taking the form of an additional tax to the land tax and intended as compensation for hail damage done; this additional tax, however, aroused wide-spread discontent and was in consequence abolished.

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(1) *Assekuranz-Jahrbuch*. Wien und Leipzig, 1934, p 407

(2) *Die Versicherung*. Organ fur Versicherung, Hypothekenwesen und Geldwirtschaft, Wien, 5 January 1933, p. 30.

(3) WEISS. Die Hagelversicherung in der Weltwirtschaftskrise. Assekuranz-Jahrbuch 1934, p 220.

In 1923 a law was passed in accordance with which there had to be instituted in each province an insurance credit against hail, which might also be worked by several provinces jointly.

The following are the main provisions of this law (1).

Provincial hail insurance credit must be administered by a provincial Council, or, if the general meeting of the province so decide, by a society on a co-operative basis or by a share company, provided that such a company is already in existence. The capital required for such administration must be drawn from the following sources; (*a*) sums received each year for hail insurance, *i. e.*, the annual contributions paid by the owners of crops and fruit insured; (*b*) subsidies granted each year by the Minister of Agriculture and Waters to the provinces on the basis of a special credit allocated for the purpose on the annual budget of the Ministry; (*c*) subsidies the total of which must be entered on the provincial budget voted by the Council of the province. This capital was assigned to meeting the compensation payments relating to the damage caused by hail to insured crops and fruit crops as well as to the refunding of all other expenses arising out of the giving of effect to the law in question.

The Provincial Council or the institution authorised by the administration of the insurance credit must fix each year the total of the insurance contribution to be paid per hectare and on the basis of the crop return value declared for the insurance of each category of sown crops or fruits.

In accordance with this law the minimum crop return value per hectare acting as basis of the insurance, was for the various crop categories:

(*a*) for barley, oats and buckwheat	500	dinars
(*b*) for wheat, rye and large grained barley	700	»
(*c*) for maize	800	»
(*d*) for hemp and flax	1,200	»
(*e*) for orchards	1,200	»
(*f*) for turnips	1,500	»
(*g*) for vines	1,800	»
(*h*) for pot herbs and olive-trees	2,500	»
(*i*) for tobacco	2,000	»

The owner was empowered by this law to insure his crops and his fruits for a higher sum provided that it does not exceed the real value of the return per hectare of the land in question. The permanent provincial Committee had to forward to all the communes of the province at latest by 1 March the list of the totals of the contributions for all the categories of sown crops and of fruits which could be insured against hail. The communal authority, on receiving the list, had, within a period of five days, to communicate it to all the landowners concerned in the commune. The insurance came into force only from the date on which the landowner submitted to the authority his declaration of insurance in due form (not later than 1 May) and on which he paid the contribution due from him. For vines the insurance began to run from the first budding only, and for orchards from the flowering of the fruit trees. Compensation for hail

(1) *Sluzbene Novine*, No. 189 (21 September 1923).

damage was to be paid after expert valuation. If the sum fixed by the valuer was higher than the declared value and the insured sum, compensation was to be paid in proportion to the declared value and the insured sum, and if the figure was lower, according to the valuation.

In accordance with the provisions of this law a permanent fund had been established at the Ministry of Agriculture and Waters for subsidising the provincial credit establishments for hail insurance, with a capital of 100,000,000 dinars which was to be placed by the Ministry of Finances within a period of three years in the State Agricultural Bank to be founded in accordance with a special enactment, and, until such law had come into force, in the Mortgage Bank of the State. In addition to these funds there was to be formed a State reserve fund and in each province a provincial reserve fund.

On the basis of this law in 1928 the Administration of the Littoral authorised the foundation of a hail insurance institute; in 1930 however this institute was dissolved at the same time as the law already referred to was abrogated.

In 1931 a new law was enacted making obligatory the insurance of sowings and of crops against hail. Compulsory insurance in Yugoslavia is regulated at present on the basis of this fundamental law (1).

By this law, dated 10 February 1931, the Minister of Agriculture is empowered, on the proposal of the prefects of the provinces, each for his own administrative area, to make enactments in respect to compulsory insurance of sowings and crops, and for the allocation of the expenses required for the carrying out of this insurance, that is to say, the expenses incurred by each landowner or holder in the endeavour to establish an agreed contribution per unit of cultivated area.

In accordance with this law, every prefect of province is expected to issue for his province regulations for bringing into force compulsory insurance and for the allocation of the expenditure relating to such insurance.

All regulations and amendments to regulations are submitted to the approval of the Minister of Agriculture.

On the basis of this law the following ordinances have been issued:—

(*a*) Ordinance of 4 January 1932, relating to compulsory insurance against hail of sowings and crops in the province of the Littoral (Primorsk-Banovina) (2).

(*b*) Ordinance of 18 January 1932 relating to compulsory hail insurance in the Danube province (3).

(*c*) Ordinance of 19 February 1932 relating to compulsory hail insurance in the province of Urbatz (4).

(*d*) Ordinance of 28 January 1933 relating to compulsory hail insurance in the province of Zeta (5).

(*e*) Ordinance of 6 March 1933 relating to compulsory hail insurance in the province of the Save (6).

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(1) *Sluzbene Novine*, No. 43 (25 February 1931)
(2) *Sluzbene Novine*, No. 11 (15 January 1932).
(3) *Sluzbene Novine*, No. 18 (25 January 1932).
(4) *Sluzbene Novine*, No. 51 (4 March 1932).
(5) *Sluzbene Novine*, No. 27 (6 February 1933)
(6) *Sluzbene Novine*, No. 54 (9 March 1933).

Up to last year compulsory insurance has been brought into force only in the Save province.

The following are the provisions contained in the Ordinance introducing this type of insurance into the Province of the Save.

Hail insurance of sowings and crops in the Save province must be effected through the intermediary of an institution established for the purpose in connection with the Agricultural Section of the Royal Administration of the Province. This institution the office of which is fixed at Zagreb is called " Establishment for Hail Insurance of Sowings and Crops in the Province of the Save."

This institution is thus a self-governing institution of the Province in direct subordination to the Royal Administration of the Province, Agricultural Section.

The sphere of activity of this institution includes all the territory of the Province.

The insurance financial year begins on 1 September of each year and ends on 31 August of the following year. All the main sowings and crops on the area registered as ploughlands (*oranice*) in the land register are considered as insured and also all vineyard products with the exception of vineyards planted in hybrids (*nasadenih hibridina*), these latter are not considered as insured in any case. Insurance of sowings and crops on the arable lands extends from 20 April till till the time of harvest or gathering, the insurance of clover, lucerne, peas, vetches for stock feed, up to the beginning of flowering; insurance of clover, lucerne, peas and vetches for seed extends from the full blossoming time till the reaping; the insurance of potatoes up to flowering, that of vines from the appearance of the buds up to the vintage.

The prefect (*Ban*) of the province, on the, proposal of the Agricultural Section forming part of the Royal Administration in his charge, fixes the amount of the total payment (insurance premium) per cadastral *jutro* (unit of measure of area) which must be paid yearly by the landowners or by the holders for allocation to hail insurance. This payment must be effected by the landowners or holders to the competent commune or to the urban municipal administration between 1 September and 31 December. Any such payment not made at the time stated is to be recovered by the commune or by the urban municipal administration by means of distraint made on the landowner or holder, not later than 31 March of the following year.

On the basis of this Ordinance the prefect of the province has drawn up the regulations for application of the above Ordinance (*Pravilnik*).

The organisation described may be considered as a continuation of the territorial institution which had previously exercised activity in the same province (1).

As already stated, up to 1934 the compulsory insurance against hail damage had been applied only in the Save province. In the other provinces, as the compulsory insurance prescribed by the legislative provisions has not come into force, the situation is a temporary one which acts as markedly limiting the activity of the private insurance companies operating this branch of insurance. The Vardar Company decided in the course of 1932 on suspending activity.

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(1) WEISS, Op. cit., Assekuranz-Jahrbuch 1934, p. 221.

Hail Insurance in 1932.

1	2	3	4	5	6	7		8	
Companies	Number of policies	Premiums	Charges	Totals of 3 and 4	Insured capital	Declared Losses		Losses compensated	
						Number	Amount	Number	Amount
Croatia	488	276	93	369	7,153	109	1,117	109	425
Dunav	403	174	82	256	6,507	135	1,032	135	206
Herz.-Bos.	915	516	231	747	18,715	280	3,556	286	868
Jugoslavija	933	729	263	992	20,625	255	3,162	86	524
Riunione	253	411	145	555	11,645	86	1,738	255	586
Ros.-Fonc	401	447	167	611	13,106	198	2,557	198	624
Sava	102	64	31	95	2,611	15	79	15	23
Slavija	548	178	79	257	6,147	89	1,029	89	347
Triglav	166	106	34	140	2,656	32	205	32	72
Total 1932	*4,289*	*2,901*	*1,125*	*4,022*	*89,165*	*1,205*	*14,475*	*1,205*	*3,675*
» 1931	7,477	4,520	1,697	6,217	134,179	1,594	18,350	1,594	5,760
» 1930	9,753	6,983	2,452	9,436	193,428	1,200	13,721	1,200	3,504
» 1929	15,388	10,182	3,940	14,123	314,571	1,757	19,384	1,757	3,652
» 1928	14,026	12,843	5,020	17,869	371,393	1,941	38,524	1,941	9,379
» 1927	11,172	9,787	3,207	12,994	247,286	1,588	21,524	1,588	5,808

The companies forming the Pool renew the relative agreement from year to year. The private companies operating in the Save province, as soon as the compulsory insurance came into application, abandoned their activity in the province in respect of that branch of insurance, with the exception of two insurances on hemp (1).

The following table reproduces the most important data relating to the private companies operating hail insurance in Yugoslavia in the course of 1932, as well as the totals relating to the years 1927-1931.

It will thus be seen that in the course of 1932 a perceptible decline is to be noted in the activity of private companies operating this branch of insurance.

The steady fall in the prices of farm products and the marked decrease in the profit capacity of agriculture has reacted unfavourably on the turnover of the companies in question (2).

In addition to these factors there must be taken into account the uncertainty arising from the existence of the legislative provisions framed to introduce compulsory hail insurance but not yet applied in 1932, and by the law on the protection of agriculture; this law has occasioned among the insurance companies some apprehensions in regard to the acceptance of premiums covered by bills of exchange, since on the other hand it was not possible at the time of the conclusion of the contracts to obtain payment for premiums in cash.

The falling off of business became more marked in 1933. The following are the comparable data relating to 1932 and 1933 (3).

COMPANIES	Number of policies 1932	1933	Difference + or — in 1933 absolute	%
Croatia	487	281	— 206	— 42
Dunav	406	472	+ 66	+ 17
Herceg	924	1,010	+ 86	+ 9
Jugoslavija	932	827	— 105	— 11
Riunione	258	189	— 69	— 26
Russia-Foncière	461	326	— 135	— 29
Sava	94	81	— 13	— 14
Slavija	548	323	— 225	— 41

PRODUCTS INSURED	Number of policies 1932	1933	Difference + or — in 1933 absolute	in percentage
Cereals	3.957	3,282	— 675	— 17
Wine	187	133	— 54	— 29
Hops and tobacco	84	2	— 82	— 97
Hemp	9	84	+ 75	+ 833

PRODUCTS INSURED	Premiums (without charges) 1932 (dinars)	1933	Difference + or — in 1933 expressed as %
Cereals	2,442,941	2,435,243	— 0.3
Wine	467,810	240,095	— 49.0
Hops and tobacco	62,338	1,050	— 98.0
Hemp	71,880	451,714	+ 53.0

(1) *Die Versicherung*, 30 August 1934, p. 558.
(2) *Die Versicherung*, 5 January 1933, p. 29.
(3) *Die Versicherung*, 26 October 1933, p. 741.

A considerable decline is to be noted in respect of the hail season of 1934 up to 1 August as compared with the hail season of 1933 to the same date, amounting to nearly 50 per cent. decline for the premiums and charges and 45 per cent. for the sums insured (1):

		1933	1934
Number of policies		3,455	2,382
Premiums	dinars	3,091,077	1,488,754
Charges	»	1,182,723	572,887
Sums insured	»	87,662,217	40,140,127
Losses declared	»	10,566,253	4,415,133
Number of persons making claims		989	598

It has not yet proved possible to make any statement in respect of the figures of compulsory hail insurance in the Save province.

F. ARCOLEO.

PUBLICATIONS RECEIVED BY THE LIBRARY

Books.

Statistics.

INTERNATIONAL COTTON STATISTICS Consumption of cotton for half-year ending 31st January, 1935, and Stocks of cotton in spinners hands on 1st February 1935. Manchester, [T G. Evans] 1935. 28 p. (International Federation of master cotton spinners' and manufacturers ' Associations).

Rural Economics.

DI CASTELNUOVO, A. Agricoltura e agricoltori in regime fascista. Roma, Arti Grafiche Menaglia, 1935 (Problemi dell'ora).

DUMMEIER, E F. [and] R. B. HEFLEBOWER. Economics with applications to agriculture. London, McGraw-Hill publishing c°, 1934. X, 742 p.

OXFORD. Agricultural economics research institute. Miscellaneous papers in agricultural economics. Vol. VII. 1931-34. Oxford, 1934.

SERPIERI, A. Fra politica ed economia rurale. Firenze, G. Barbèra, 1934. 313 p. (Biblioteca di coltura per i rurali, sotto gli auspici della Reale Accademia dei Georgofili, v. 2).

TRAXLER, A. Corporativismo e mezzadria. Pisa, Nistri-Lischi, 1934, 42 p.

Labour.

FRANCE. CONSEIL NATIONAL ÉCONOMIQUE. Les conventions collectives de travail. Rapport présenté par Pierre Laroque et adopté par le Conseil national économique dans sa Sessione du 30 novembre 1934. Paris, Impr. Nationale, 1934. 304 p.

(1) *Die Versicherung*, No. 35, 30 August 1934.

SHOTWELL, T. The origins of the International labor organization. New York, Columbia university press, 1934. 2 v. (Carnegie endowment for international peace. The Paris peace conference: history and documents).
v. 1. History. 407 p.
v. 2. Documents. 592 p.

Agricultural Credit.

RAJNIERO DE POL, U. Il movimento italiano per la tutela del credito commerciale. Milano, « Ita » [1934]. XX, 287 p.

Co-operation.

YEAR BOOK OF AGRICULTURAL CO-OPERATION 1935. Edited by the Horace Plunkett Foundation. London, King 1935, 407 p.

ANNUAIRE GÉNÉRAL DES SOCIÉTÉS COOPÉRATIVES DE FRANCE ET DES COLONIES. Edition 1933-34. 12ème année. Paris, 1934. 796 p.

Insurance.

ASSECURANZ-COMPASS. INTERNATIONALES JAHRBUCH FÜR VERSICHERUNGSWESEN. 43. Jahrgang 1935. Wien, [Gottstein] [1935]. 1320 p.

Commerce.

BERICHT DER GETREIDE-BÖRSE ZÜRICH erstattet vom Vorstande an die Mitglieder für das Geschäftsjahr 1934. [Zürich, 1935] 29 p

FAURE, BLATTMAN & CO. LONDON. Review of the oil and fat markets 1934. London [Barrup, Mathieson & C.] [1935]. 108 p.

IL MERCATO DEI CEREALI DI MILANO. 3ª Edizione. 1934. Milano, Sindacato della Sezione cereali della Borsa merci di Milano e della Associazione granaria di Milano, [Industrie Grafiche Moneta], 1934. 390 p.

SUISSE COMMISSION D'ÉTUDE DES PRIX. Die Verhältnisse im schweizerischen Lebensmittelkleinhanden. Bern, 1934. (Veröffentlichung Nr. 11 der Preisbildungskommission des Eidg. Volkswirtschaftsdepartementes. Sonderheft 20 der « Volkswirtschaft », hrsg. vom Eidgen. Volkswirtschaftsdepartement).

Industry.

JEROME, H. Mechanization in industry. New York, National Bureau of economic research, 1934. XXXI, 484 p. (Publications of the National bureau of economic research, nº 27).

Various.

BENCKISER, N. Italien als Nation. Fascismus, Volk und Welt. Frankfurt a. M., Societäts-Verlag, 1934. 55 p.

FELS, E. Der Mensch als Gestalter der Erde. Eine Beitrag zur allgemeinen Wirtschafts- und Verkehrsgeographie. Leipzig, Bibliographisches Institut, 1935. 206 p.

MIGLIORINI, ELIO. Bibliografia geografica della Regione italiana. Fascicolo IX. 1933. Roma, R. Società geografica italiana, 1935. 147 p.

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NOTES ON THE USE OF FARM ACCOUNTANCY DATA IN COMPARATIVE ECONOMIC INQUIRIES

The agricultural depression and the various measures which have been and are being taken by the Governments and by the producers' organisations with a view to improving the economic conditions of the farmers, call for a close study of the exact situation with regard to the production and marketing of the various agricultural commodities. In trying to help a certain branch of agriculture it is essential to know with as great a precision as possible all the facts bearing upon the position of this particular branch of the agricultural industry. Only by carefully weighing, in the light of all the available information, the relative advantages of the production of a given commodity in relation to that of other competing crops, is one in a position to decide upon the way in which the available means and resources should be employed for ensuring to government intervention or to concerted action on the part of the farmers themselves, the greatest and most lasting success.

It is true that, at present, in a world broken up into a vast number of more or less isolated national economies, surrounded by trade barriers and each seeking by means of deliberate planning and control to achieve, as far as possible, a condition of economic self-sufficiency, considerations of relative costs and advantages have largely ceased to play the part they used to play when world economy was based on free competition. But it is equally true that one cannot indefinitely ignore so fundamental a proposition of economics as the necessity of achieving the maximum effects with the minimum outlay, without reducing one's standards of life and civilisation and heading to ruin. If planning, now being applied mostly as an expedient adopted to meet an emergency situation, is to become a successful economic system and to replace competition, it will have, both nationally and internationally, to take into consideration the basic maxims of economy in effort and outlay, which is but another way of saying that planned economy, no less than the competitive system, will have to be guided by considerations of relative costs and advantages, which, in their practical application, may be subject to certain compromises and modifications due to political and other considerations, but which cannot be ignored or dispensed with in a world which needs progress.

All this applies to farming with particular force, since the precarious position of agriculture in the present depression forced all countries to take especially drastic measures of intervention in this domain. Agriculture, only two or three years ago the least organised industry, now is probably one of the most thoroughly controlled in its most vital branches in most countries; and both nationally and internationally many exceedingly complicated problems and situations have been produced by the isolated acts of emergency intervention taken in various countries on behalf of particular branches of farming. In some cases, as a result of these emergency measures, situations have been created which, in the long run, would be untenable and would need revision and re-adjustment. Gradually, all that is in the nature of purely temporary emergency measures in agricultural planning, and may be essentially anti-economic, if considered in general perspective, will have to be modified and adjusted; and these adjustments and modifications, which will have to be made in order to make planning effective and to ensure economic progress, will have to be made in the light of an exact knowledge of the economic, social and natural factors which make the production of a given commodity more or less remunerative under given conditions.

More than ever, therefore, there is need of a close study of the conditions of production of the different agricultural commodities. Every reliable source of information bearing upon these conditions must be drawn upon for its contribution to this inquiry, and the more intimate are the details of these conditions which can be gathered from an examination of the available data, the more valuable may be the light they can shed upon the problem of comparative advantages, which, as we have pointed out, is in effect the problem of the most efficient use of the country's resources in accordance with the basic maxim of economics.

A new programme of work of the Institute was adopted by the XIIth General Assembly in October 1934 in its resolutions upon the Report presented to it on behalf of the Permanent Committee by Dr. H. C. Taylor. This programme involves the concentration of attention upon the study of the conditions of production and marketing of various agricultural commodities, with a view to bringing out the comparative advantages possessed by different countries or regions in respect of the various products entering into international trade. Every branch of the work already being done by the Institute will be called upon to make its contribution to the new programme. A branch of work which will have a special contribution to make to the study of the conditions of agricultural production in various countries or regions is the economic analysis of the results of farm accountancy, already being collected or to be collected by the Institute.

The results of farm accountancy can serve the purpose of research in the problem of comparative advantages either as such, that is, as data concerning the economic and financial situation of the farm as a unit, or as costings, derived from farm accountancy and showing the specific costs of the various commodities produced.

At first sight, it would appear that, in commodity studies, aiming at determining the relative advantages of production of various crops in different countries or regions, it would be the comparison of specific costs of production that would

be of decisive importance, and that farm accountancy, as such, would have little to contribute to these studies. This view, in spite of its apparent plausibility, cannot be accepted on technical grounds.

The reasons for rejecting the method of international or interregional comparison of specific costs as a basis for the determination of comparative advantages of production, are as follows.

Agricultural costings are the result of rough approximation, since, with the relatively unimportant exception of single-crop cultivation or of primitive animal husbandry, the farm is a highly complex combination of branches of production, in which a very large part of farm expenses and of general costs represents overhead charges. There exists no satisfactory method of distribution of these charges among the various branches of production, so that they are attributed to the various crops more or less arbitrarily. The extent to which the results of costings can be affected by this arbitrary distribution of charges can be judged from the fact that such overhead charges—exclusive of labour costs, which also cannot be exactly attributed to the different crops—represented, according to the farm accounts of 1930-31, for the mixed farms of Wurttemberg, in Germany, 33.18 per cent. of the total farm costs, and in Switzerland, for the same type of farms, 37.82 per cent.

Under such conditions, specific costs cannot be determined with a degree of approximation which would enable satisfactory comparison to be made as between different localities or different types of farms, even though they may be sufficiently accurate for work which does not depend to the same extent on the accuracy of the estimates. Thus, costing data, even rough, can often serve as a satisfactory guide for the determination of a workable basis for the establishment of fixed minimum prices, but for comparisons, even within the same country, between different systems of farming, it may be exceedingly dangerous to trust them.

Even should it be possible to determine specific costs with sufficient accuracy, their international or even interregional comparison would be liable to mislead as to the comparative advantages of production of a given commodity. These advantages would depend upon the margins between prices and costs which would be available for the producers. Supposing, however, that the prices and the costs of production were the same in all cases, and that the margins, accordingly, were equal, it would not necessarily follow that none of the producers would have any advantages over the others. Whether or not, in spite of all, some producers would enjoy advantages over the others, would depend upon the organisation of farming in every particular case, and more particularly upon whether the crop is grown on peasant family farms or on large farms dependent on hired labour; whether the production of a given commodity forms a necessary element of a system of mixed farming or is the principal object of the farm business, etc. Given a certain margin over the estimated costs of production of the crop in question, the family farm, or a mixed farm in which that crop forms a necessary part in the rotation, would enjoy a considerable advantage over a farm employing hired labour or one of which the growing of that particular crop is the principal object.

The information concerning the details of the economic and social organisation of the production of various agricultural commodities is only partly available in the general statistical sources, and the results of farm accountancy are often needed to supplement them and to help in their interpretation. Thus, the data concerning, say, the distribution of holdings according to size, showing the prevalence of certain size-groups, as well as, in some cases, their division into peasant farms and large farms, might be obtained from general statistical sources; but the more intimate and, sometimes, exceedingly important details concerning the organisation of the farming business and its reaction to the various influences to which it is subject, such as measures of encouragement and protection, changes in the value of money or in credit conditions, taxation, etc., can only be revealed by the systematic collection and study of the results of farm accountancy.

When we speak of comparative advantages we really mean a comparison of the conditions of production and marketing which make the cultivation of a certain crop more profitable either than that of another crop in the same locality or than that of the same crop in a different locality. In the former case we deal with the competition of two or more different crops for the use of the farmer's land, capital and labour in preference to some other crops. In the latter case, the same commodity produced in various localities appears in competition on the market, and the competitive capacity of the lots of different origin depends upon the difference in the conditions under which they are produced. We obtain a general idea of these conditions from a number of different sources: legislative and administrative provisions bearing upon agriculture in the countries concerned, statistics of prices, of the distribution of crops, of yield and of total production, systems of tenure and cultivation, labour conditions, etc.; but the way in which they affect the economic position of the various types of farms, the way in which the organisation of the farm business reacts to the various influences to which it is subject, is a matter which only the possession of material supplied by farm accountancy can demonstrate conclusively.

The nature of the statistics based on farm accountancy makes them, on the one hand, particularly valuable as a source of objective empirical data bearing upon the economic organisation of farming and upon its evolution under the influence of various factors. On the other hand, the fact that these data cover only a relatively very small fraction of the total number of farms and do not always represent all the groups or types of farms in the country concerned, makes it necessary to use them with the greatest circumspection. In the first instance, the results of farm accountancy must be carefully sifted according to the degree to which they may be considered as fair samples of the universe to which they belong. In some cases, even numerous observations may not be satisfactory from the point of view of statistical sampling; in others, to take the other extreme, the continuous study over a number of years of a relatively small, but stable, group of farms, which does not pretend to be representative of anything but itself, may bring to light many interesting and important factors and reveal tendencies which are not confined to that group alone.

Speaking here of the limitations to which farm accountancy data, as material for economic research, are unavoidably subject, one must refer to the fact that,

owing to technical reasons, such data become available with a very considerable delay. The statistics based upon the results of farm accountancy are essentially a by-product of the work carried on by the various farm accountancy centres with the object of helping the farmer to rationalise and more efficiently to control the management of his business. Between the moment at which the local centres obtain the book-keeping results of the individual farmers, after the close of the business year, and the moment at which, on these accounts being checked and closed, and the necessary analysis and tabulations being performed, the detailed results necessary for economic research become available in the country concerned, there usually passes at least a year. Then, the national centres, which supply their data to the Institute, are in a position either to fill the Institute's questionnaires or to send to it their own publications, or both. This means that, at the moment of writing, in May 1935, the Institute actually gets farm accountancy data from the contributing countries for the year 1932-33, and that some of the materials for which it depends on published data, are not yet available, since the publications concerned have not yet appeared. As the material thus obtained requires at least 6 to 9 months for its analysis and tabulation before it can be used in comparative international studies, it cannot be available for the purpose of such studies till, at the best, late in 1935. Obviously, therefore, much as the investigation of farm accountancy data may give as an instrument of economic research, both on a national and on an international scale, in shedding light upon the effects upon farming in its various branches of changing economic conditions, etc., it cannot be looked upon as always ready at hand to answer a pressing question of the moment or to make forecasts of the future. Yet, by showing how farming is organised and how it had reacted in the recent past to certain influences, the results of farm accountancy, even if they become available with a certain delay, especially for comparative international studies, can still help in finding answers to current questions.

Moreover, it must always be borne in mind that, as a rule, the results of farm accountancy cannot, as such, constitute the sole source of material for economic research, and that they are but one of the many different sources available for such investigations. As a source of information, farm accountancy, on the one hand, needs to be supplemented by other materials; on the other hand, in so far as it is the only source of information concerning the details of the organisation and evolution of farming, it is a highly useful and sometimes indispensable supplement to other materials, because by the application of sampling it enables the research worker to perceive these details by supplying him with enlargements of some parts at least of the general picture he studies.

One of the most important conditions of the successful use of farm accountancy data in economic research is the availability of reliable price statistics for the countries or regions concerned. This is necessary because farm accountancy deals with the results of the farm business in terms of money, and the proper interpretation of the changes it reveals, say, in the gross returns from a given branch of production, is only possible by reference to the movement of prices. An increase or a decrease in the returns, for example, of dairy production, may

be due either to increased or diminished output, or to a rise or fall in the prices of dairy products, and as no indications of the quantities produced are generally contained in farm accounts, only by eliminating the price factor is one in a position to judge of what may be an important structural change in the agricultural industry.

Used in conjunction with reliable price statistics, farm accountancy can give a very true picture of the real trends of evolution in farming, of the changes in the relative position of the various branches of production and of the effects upon the different types of farms, upon their structure, their output and their financial position, of various measures of encouragement and protection, of financial and monetary policies, etc. These effects, failing farm accountancy data, can only be guessed at on the ground of general information.

Thus, even if farm accountancy cannot supply internationally or interregionally comparable financial data, referring to specific costs of production, to the relative profitability of the different branches of farming, etc., if used with the necessary circumspection, in combination with other data and, more particularly, with reliable statistics bearing upon prices, the distribution of land according to uses and to crops, the distribution of holdings, the internal and foreign trade in agricultural products, etc., it can supply exceedingly valuable material for judging of the comparative advantages enjoyed by the various branches of production in different localities, as well as by the various competing crops in the same locality. What is exceedingly important is that farm accountancy enables us to see how the conditions of production of various agricultural commodities and, accordingly, the comparative advantages they give, are affected by measures of regulation and control or by other influences, such as the development of new markets, the appearance of alternative supplies, changes in monetary conditions, etc. In all these cases, as well as in judging of the financial position of the agricultural industry in its different branches, that is, of its being able or not to pay its way, and of the extent of its paying capacity—a question of basic importance in all inquires bearing upon comparative advantages—farm accountancy supplies information which cannot be obtained from other sources. Its importance is also exceedingly great in all statistical research bearing on the consumption of agricultural products, since it is only by referring to farm accounts that one can obtain, by the method of sampling, an empirical basis for estimating the proportion of the various agricultural commodities consumed or transformed on the farm itself, as distinguished from the part brought to market.

It is practically impossible to enumerate and to discuss in abstract all the uses to which economic research, in expert hands, can put the results of farm accountancy in the study of various agricultural problems. As well one might ask one to tell what are the problems which can be solved by the application of the infinitesimal calculus in mathematics. Practical research puts a concrete problem before the student, and if he is in command of a number of instruments of research, he uses the one most suited to his purpose, considering its special characteristics and its necessary limitations.

Farm accountancy data, either obtained by the method of sampling or resulting from the monographic study of a small group of farms, cannot be used

as the only source of material in agricultural economic research. Used as supplementary material, they enrich the equipment of the student considerably by enabling him to gain insight into such aspects of the problems dealt with which would not be gleaned from any other sources.

George PAVLOVSKY.

COMPARATIVE STUDIES OF THE RESULTS OF PIG BREEDING IN DIFFERENT COUNTRIES

The purpose of the following pages is to investigate in the light of farm accountancy results, the comparative advantages of different regions of the world in the matter of pig and pig-meat production.

The period covered is sufficiently long to allow some very important comparisons to be drawn, as the farm accountancy results possessed by the Institute cover the majority of the European countries for 1927, 1928, 1929, 1930 and 1931. The Institute also expects shortly to receive farm accountancy data for the United States of America. It is impossible to have more recent returns than these. The Farm Accountancy Offices themselves require from one to two years, according to circumstances, for working out their statistics based on farm accountancy returns, while the Institute, for its own part, needs at least a year for preparing its own tables. As accountancy results for more recent years come to hand, they will be used so as to increase the value of the present study.

It is proposed to omit all such farm groups as are not truly typical of the region from which they are derived, and to utilise in this study the statistical method, which gives excellent results whenever the conditions which have given rise to the phenomena considered are not completely known. When the farm groupings are sufficiently homogeneous, the results of farm accountancy bring out clearly the influence of geographical situation, altitude and climate, of the distribution of the crops; of the predominance of a particular branch of production, of the dimensions of the farms, etc. With the aid of information, obtained from other sources, such as the import and export trade, prices, etc., an endeavour will be made to state what has been the position of pig fattening in different countries and in different regions over a certain number of years.

In the first place, Table I represents an attempt at a general grouping of the countries, which export pigs and pig-meat. Two countries, Denmark and Poland, figure at the head of the list; both are large importers of young pigs, which they fatten and then export, either as grown live pigs or in the form of pork or bacon. Next come the Netherlands, Lithuania, Sweden and Estonia. In a second group will be found Austria, Czechoslovakia, Switzerland, Finland and Norway. The most noteworthy of the importing countries are Austria and Czechoslovakia. The first imports largely for provisioning the City of Vienna,

TABLE I — *Imports and Exports of pigs and pig-meat in the principal European countries.*

Country	Pigs (head)					Pork and bacon (quintals)				
	1927	1928	1929	1930	1931	1927	1928	1929	1930	1931
1 — COUNTRIES EXPORTING PIGS AND PIGMEAT (INCL. BACON)										
Imports										
Netherlands	89,359	99,490	28,039	26,440	17,357	1,010,528	942,230	688,900	771,300	1,015,575
Denmark	89,359	99,400	28,039	26,440	17 357	2,556,255	2,720,623	2,487,701	3,063,637	3,761,208
Lithuania (2)	65,033	44,591	100,225	155,938	109 206	18,261	13,266	70,378	72,992	231,156
Poland (2)	757,916	1,277,712	952,292	717,050	370,708	181,201	210,333	235,778	354,989	730,471
Sweden	20,100	18,544	122,037	74,430	48,684	243,260	205,766	170,871	257,216	278,060
Estonia	310	768	894	24	9,211	26,502	21 954	12,832	12,330	31,324
2 — COUNTRIES IMPORTING PIGS AND PIGMEAT (INCL. BACON)										
(Imports + exports —)										
Austria	834,137	921,804	767,576	737 151	735,072	116,161	142,312	146,800	117 384	102,282
Czechoslovakia	678,152	853,365	796,701	536,770	187,546	42,470	36 780	40,910	23,892	57,864
Switzerland	7,206	(exp.) (3)	9,380	61,173	13,912	3,767	3,785	3,303	4,510	9,149
Finland	50	6	18	320	8	21,870	25,857	21,901	4,630	10,295
Norway	1 265	98	8,597	17,896	1,400	10,792	29 291	23,364	12,006	4,156
3 — COUNTRY IMPORTING PIG MEAT AND BOTH IMPORTING AND EXPORTING PIGS										
(Imports + exports —)										
Germany	+ 46,886	— 782	+ 123,654	— 90 051	— 140,230	+ 276,096	+ 141,288	+ 169,518	+ 105,120	+ 160,255
4 — COUNTRY MAINLY IMPORTING PIGS AND EXPORTING PIGMEAT										
(Imports + exports —)										
Latvia	+ 10,095	+ 3,555	+ 6,509	+ 2,630	— 15 402	— 39,228	— 15 533	+ 4,039	— 12 035	— 17 302
(1) Import of young porkers	11,431	14,015	125,713	90,068	48,976	—	—	—	—	—
(2) Do.	5,332	4,332	8,025	15,302	19 281	—	—	—	—	—

and the second for supplying the requirements of its large cities and industrial centres. Both Switzerland and Sweden are importers on a small scale. Finland in 1931 began an export trade in pork and bacon. Germany has been separately grouped, as in 1927 and 1929 it imported pigs and pig-meat, whereas in 1928, 1930 and 1931 it exported pigs in constantly increasing numbers while maintaining at the same level its pig-meat imports. The last group includes Latvia, which after being an importer of pigs up to 1930, began in 1931 to export pigs on a considerable scale. Except in 1929, Latvia was a pig-meat exporting country. In 1928 the harvests were poor, the numbers of pigs diminished in 1929 and the country was compelled to import pig-meat for home consumption.

There are therefore three groups of countries to be considered: the first devotes its attention to pig fattening with the object of finding markets for the product in other countries, the second imports pigs or pig-meat for home consumption, while the third is not concerned either with the export or import trade in pigs.

The purpose of the production has no clearly marked influence on the number of the pigs, except in Denmark, where the total is twice as high as that in the two other countries, Germany and the Netherlands, which show the highest proportion of pigs per each 100 hectares of land under cultivation. The total number of pigs is very high in Germany, a country which is highly industrialised and possesses great urban centres. In Switzerland and in Austria the number is only half as great as in Germany and in the Netherlands. A further marked reduction, but in the same proportion, is to be noted in Lithuania, Poland, Sweden and Norway and the lowest level (10-15 pigs per 100 hectares) is reached in Estonia, Latvia and Finland. It should be added that, with the exception of Norway, all the countries for which information has been received by the Institute, show an increase in the number of pigs in a higher or less degree during 1931, and this increase may undoubtedly be attributed to the heavy fall in prices, which has induced the breeder to attempt to make good his losses thus caused by increasing his production.

The influence of the price fall is clearly seen in the second part of Table II, which refers to the gross return from pigs per 100 hectares of cultivated area. These gross returns are highest for Denmark, Austria and Switzerland, where also the prices of pig-meat are at a similar high level. Denmark stands considerably ahead of Austria and Switzerland, as the high number of the pigs it possesses gives it a great advantage over the two other countries named. Norway will be found to rank fourth in the scale as, though the price level for pig-meat is as high as in the other three countries, it has a smaller number of pigs. The other countries take a relatively inferior place according as the number of pigs is smaller or the prices lower.

In 1931 the gross return from pig breeding is reduced in almost all the countries, in proportions more or less striking when compared with the gross returns for the previous years; for Denmark, Poland, Estonia, Finland, Latvia and Germany the rate of reduction is as high as 50 %. The return is maintained at the same level as in previous years in Lithuania and at the same level as in 1927 in Sweden and Austria. Here the question of prices is the leading factor

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TABLE. II — *Number of pigs per 100 ha of the cultivated area in the principal European countries where pigs are fattened.*

Country	Number of head per 100 ha					Gross yield of pigs per 100 ha of the cultivated area					Price of pig meat per kg. in 1927 30
	1927	1928	1929	1930	1931	1927	1928	1929	1930	1931	
1 — COUNTRIES EXPORTING PIGS AND PIG-MEAT (INCL. BACON)											
Netherlands	—	—	—	87 45	—	—	—	—	—	8 598	1 54
Denmark	126 82	114 19	122 53	156 65	176 82	23 574	29 987	30,619	20 091	14,821	2 —
Lithuania	24 22	25 43	22 63	28 95	34 68	—	2,320	2,097	2,686	2,524	1 66
Poland	25 67	—	19 31	23 73	28 61	5,150	4,904	5,386	2,751	2,122	1 24
Sweden	29 57	29 19	—	35 —	35 79	2 604	2,935	4,934	3,879	2,464	1 45
Estonia	12 63	11 64	9 95	10 35	11 51	2 411	2,500	2,710	2,053	1,326	1 41
2 — COUNTRIES IMPORTING PIGS AND PIG-MEAT (INCL. BACON)											
Austria	—	—	—	45 10	—	10 223	8,281	9,533	10,302	9,055	2 23
Czechoslovakia	—	—	—	33 23	30 83	—	-	—	—	—	—
Switzerland	—	—	—	—	42 17	13 453	11 421	14,478	16,097	11,801	2 03
Finland	12 43	12 49	11 92	12 30	13 68	2 680	2,715	2 742	2,295	1,610	1 64
Norway	31 74	29 73	29 —	33 93	31 65	9,155	11,456	10,811	9,440	7,077	1 99
3 — COUNTRY IMPORTING PIG-MEAT AND BOTH IMPORTING AND EXPORTING PIGS											
Germany	79 80	68 20	67 90	79 80	81 07	-	—	5,166	3,780	2,999	1 74
4 — COUNTRY MAINLY IMPORTING PIGS AND EXPORTING PIG-MEAT											
Latvia	14,58	14 59	10 42	14 26	19 43	2,618	2,135	2,382	2,521	1,495	1 81

and it is not proposed to go into further details, as the subject will be treated more fully in another part of this article.

It may also be remarked that, with the sole exceptions of Austria and Switzerland, the gross return from pigs was at its highest in 1929, and further reference will be made to this point later.

Now that the influence of markets (both import and export) and also of prices on the gross returns from pig fattening has been exemplified, it is proposed to take the year 1929, the most prosperous for the pig fattener, as a point of departure for the consideration of the influence exercised by regional geographical position, farming methods and the relative size of the farm on pig breeding. Taking the total given by the gross return from stock farming and the gross return from crop growing as equivalent to 100, it will be seen what is for each region, for each system of farming and for each dimensional class of farm, the relative importance of the gross return from pig farming.

The method of farm organisation is a very important factor in the final result of pig-fattening.

In its main features this organisation is almost the same everywhere; on farms which chiefly depend on their profits from stock, live-stock products represent about 80 % of the total, except naturally on the great farms in Germany, where the percentage falls to 55 %. On farms which are mainly engaged in crop production, live-stock products are equivalent to 30-60 % only of the total.

If it is desired to go further into detail, every branch of production would require to be treated separately and the different types of farming in each of the countries here considered would have to be reviewed. In the first place the farms which in the main depend on live-stock products may be cited.

Denmark occupies a special position. It can show the highest percentages of gross returns from pig breeding, which is almost half of the total gross return for the small farms. As the area of the farm increases, the percentages for gross return from pig breeding and from the raising of other kinds of stock diminishes, though on the other hand the importance of crop production is increased. Dairy products on the other hand remain stationary.

Passing now to the Netherlands, in Overijssel it is found that the gross return from pig-farming is only half as high as in Denmark. Pig breeding comes below milk production and cattle raising. Crop production is of very little account, except in districts with sandy and peaty soils.

In Norway, there is again to be noted a reduction in the value of the gross return from pig breeding as compared with that in Denmark. The gross returns from milk production and cattle raising have the same relation to the total gross return as in the Netherlands.

In this country crops occupy a larger place than in the two others and, they appear to be most flourishing in Oestlandet.

In Sweden the geographical situation of the farm has a very marked effect on farming methods. In Upper Norrland, for example, the gross return from pig raising does not exceed 10 % of the total gross return, in Lower Norrland the percentage varies between 14 and 16 %, while in the Centre it rises to 26 %

TABLE III. — *Position in 1929-30 of pig farming as compared with the other branches of production.*

Country or region	Gross return in percentage of total					
	pig-farming	milk and dairy products	other live stock	animal production	crop production	Total
I — FARMS MAINLY ENGAGED IN LIVE STOCK PRODUCTION						
Denmark —						
(less than 10 ha)	41.10	38.66	16.96	96.72	3.28	100
(10- 20 ha)	41.88	38.79	13.76	94.43	5.57	100
(20- 30 ha)	41.37	37.68	14.36	93.41	6.59	100
(30- 50 ha)	40.87	39.23	13.77	93.87	6.13	100
(50-100 ha)	38.47	37.79	12.12	88.39	11.61	100
(more than 100 ha)	24.51	38.34	8.49	71.34	28.66	100
Netherlands —						
(Overijssel) pasturage districts	20.30	50.59	25.85	96.74	3.26	100
(Overijssel, IJsselstreek)	20.45	32 —	39.04	91.49	8.51	100
(Overijssel, sandy districts)	27.10	41.20	29.17	97.47	2.53	100
(Overijssel), districts sandy and peaty (mixed)	26.23	32.25	29.86	88.34	11.66	100
Norway —						
Oestlandet	14.39	43.20	20.21	77.80	22.20	100
Tröndelag	12.90	41.24	26.88	81.02	18.98	100
Sörlandet	13.24	39.20	30.62	83.15	16.85	100
Vestlandet	12.04	34.01	37.58	83.63	16.37	100
Sweden —						
Upper-Norrland (less than 10 ha)	9.69	54.07	25.93	89.69	10.31	100
Upper-Norrland (10-25 ha)	10.10	58.48	20.08	88.66	11.34	100
Lower-Norrland (less than 10 ha)	16.58	48.70	25.14	90.42	9.58	100
Lower-Norrland (10-25 ha)	14.24	49.85	21.96	86.05	13.95	100
Centre (less than 10 ha)	19.27	38.76	30.97	89	11	100
Centre (10- 25 ha)	25.54	38.07	24.10	87.81	12.29	100
Centre (25- 50 ha)	15.49	49.61	17.57	82.67	17.33	100
Centre (50-100 ha)	9.43	57.41	14.02	80.86	16.14	100
Centre (more than 100 ha)	5.56	47.06	20.59	73.21	26.97	100
Finland —						
(peasant farms)	10.74	52.13	16.97	79.84	20.16	100
(large farms)	8.42	57.02	12.22	77.66	22.34	100
Estonia	19.34	38.47	17.22	75.03	24.97	100
Austria						
(alpine farms)	11.21	45.68	31.52	88.41	11.59	100
(dairy farms without alpland)	13.32	39.38	36.05	88.75	11.25	100
(dairy farms with alpland)	14.56	38.48	34.55	88.59	11.41	100
(mixed farms with alpland)	15.91	37.65	29.48	83.04	16.96	100
(mixed farms without alpland)	26.27	25.05	27.34	78.66	21.34	100
Switzerland						
(cattle raising farms)	7.81	28.94	57.44	94.19	5.81	100
(alpland farms)	8.81	35.94	52.09	96.84	3.16	100
(farms exclusively grass)	6.19	48.96	30.76	85.91	14.09	100
(farms growing mixed forage crops)	15.97	40.01	23.88	79.86	20.14	100
(dairy farms)	10.25	49.83	21.85	81.94	18.06	100
(mixed)	10.20	33.04	28.92	72.16	27.84	100

TABLE III (*continued*).

Country or region	Gross return in percentage of total					
	pig-farming	milk and dairy products	other live stock	animal production	crop production	Total
Germany:						
Farms raising cattle:—						
North-west	27.89	19.55	45.80	93.24	6.76	100
Grassland and pasture:						
Bavaria . . . 5–20 ha.	10.08	54.62	28.29	92.99	7.01	100
West and South: 5–20 ha.	25.71	21.33	29.57	76.61	23.39	100
West and South: 20–100 ha.	21.66	23.33	25.01	70 —	30 —	100
West and South: more than 100 ha.	13.86	29.95	14.86	58.67	41.33	100
East: 5–50 ha.	20.41	27.09	27.50	75 —	25 —	100
East: 50–200 ha.	15.21	29.13	21.74	66.08	33.92	100
East: more than 20 ha.	13.51	19.83	20.68	54.02	45.98	100
2. — FARMS MAINLY ENGAGED IN CROP PRODUCTION.						
Germany:—						
Farms growing cereals:—						
West and South: 5–20 ha.	20.56	21.76	21.90	64.40	35.60	100
West and South: 20–100 ha.	17.46	24.02	15.07	56.55	43.45	100
West and South: more than 100 ha.	12.07	19.43	10.42	41.92	58.08	100
East: 5–50 ha.	18.88	14.47	21.69	55.04	44.96	100
East: 50–200 ha.	10.67	19.20	13.21	43,08	56.92	100
East: more than 200 ha.	8.96	13.59	12.41	34.96	65.04	100
Farms growing sugar beet:—						
West and South: 5–20 ha.	7.10	21.48	11.45	40.03	59.97	100
West and South: 20–100 ha.	9.95	20.87	11.07	41.89	58.11	100
West and South: more than 100 ha.	6.02	13,74	8.32	28.08	71.92	100
East: 5–50 ha.	13.73	19.86	15.58	49.17	50.83	100
East: 50–200 ha.	7.16	17.20	8.86	33.22	66.78	100
East: more than 200 ha.	5.80	12.35	10.62	28.77	71.23	100
Austria: farms growing cereals	24.16	24.53	19.20	67.89	32.11	100
Sweden:—						
South: 25–50 ha.	20.28	28.11	12.61	61 —	39 —	100
South: 50–100 ha.	25.27	33.62	8.88	67.77	32.23	100
South: more than 100 ha.	11.42	38.57	13.15	63.14	36.86	100
Netherlands:—						
Overijssel, marshy districts	1.70	3.15	7.68	12.53	87.47	100
Lithuania	20.59	23.07	12.42	56.08	43.92	100
Poland:—						
South	16.26	25.23	28.86	68.35	31.65	100
East	20.96	23.10	19.89	63.95	36.05	100
Centre	20.41	20.21	20.21	60.83	39.17	100
West	23.13	23 —	22.12	68,25	31,75	100

for farms of 10-25 hectares. As already mentioned in the case of Denmark the value of the gross return from pig-raising is reduced in proportion as the area of the farm increases and crop production grows in favour.

Passing from Sweden to Finland the situation remains the same. In Finland, there is no marked difference between peasant holdings and the large farm enterprises as regards farm organisation. The area under forest occupies up to 85 % of the total area of the farm, so that the difference between the cultivated area of the large and of the peasant farms is less marked than in other countries.

Taking the Balkan and Scandinavian countries together, Sweden and Finland derive the greatest profit from milk and dairy products as such, and the gross return from dairy products is as high as 57-58 per cent of the total gross return. In Lower Norrland and Central Sweden, where the area of the farms is either less than 10 or from 10-25 hectares, this percentage falls to 38 per cent as more use is made of dairy waste products in pig-fattening. The characteristics of the farms in these districts resemble closely those of the farms in Norway and Estonia.

In Austria, a country situated in the centre of Europe, it will be observed in passing from the alpine to the dairy and mixed farms that the importance of pig fattening and crop production shows a constant increase and that of milk production a constant decrease, as regards gross returns, while that of stock raising is unchanged. This fact signifies that, in the Alps, cheese-making has a higher importance than pig fattening with dairy waste products, while on the dairy farms these waste products are of much greater value. The organisation of the farms however remains the same, whether they possess alpland pastures or not. On the mixed farms, with alplands the importance of cheese making as a mode of using milk residues is greater than on the mixed farms without alpland, where pigs are more largely in request for utilising these residues. On the alplands the pigs pass a large part of the day in the open and browse on the grass left by the cattle.

In the Alps of Switzerland, stock raising is more in favour and pig fattening and also crop growing are relatively unimportant. Farms solely used for grazing are by preference devoted to milk production as such, and the milk residues, as in the two previous farm groups, are fed mainly to young stock. On the other hand, on the farms which grow mixed fodder crops, pigs are largely used for the consumption of by-products: 16 per cent. of the total gross return is attributable to pig fattening, while for the farm groups previously mentioned, the gross return from pig fattening amounts to 6-8 per cent. of the total only. It should be added that on the farms growing mixed fodder crops, pigs are fattened for the purpose of utilising to a certain degree the by-products of cereal growing and of hoed crops; the gross return from crop growing on these farms is a fifth part of the total gross return. The same is the case for mixed and dairy farms; young cattle and pigs share the waste products of the dairies and of the crops. It has been seen that on the alpine farms solely given over to grass and on those which are mainly used for raising cattle, calves are the chief consumers of the farm by-products.

In Germany the cattle raising farms of the North West and the grass and pasture farms of Bavaria are very little concerned with crop growing. On the first named the use of milk as such and of dairy products is of very slight importance and milk is fed first to the calves and then to the pigs. In Bavaria the farmer makes his income from the sale of milk and dairy products and stock raising is twice as important as pig fattening. In the West, South and East crops have value in proportion as the size of the farm increases as in all the other countries; on the large farms with over 100 hectares in the West and on those with over 200 hectares in the East, the gross return from stock raising is only half the total. The importance of pig fattening diminishes with the size of the farm and this is also true for stock raising, while crop production increases quite independently of stock breeding.

To sum up, it may be said that:—

(*a*) The production of milk and dairy products forms the basic factor on which the peasant farms in a great number of the European countries depend; the waste products of the dairy are fed sometimes chiefly to calves, sometimes to pigs, sometimes again both to pigs and to calves; for the rest the peasant farmer endeavours to make his main profit by the sale of milk and dairy products;

(*b*) As the size of the farm increases, the value of live-stock products is diminished in favour of crop production and farming becomes a more complex affair;

(*c*) In almost all the countries here considered, viz., the Netherlands, (Overijssel), Norway, Sweden, Finland, Estonia, Austria, Switzerland and Germany, the organisation of the farms, which are chiefly occupied in stock raising is generally similar. Denmark however stands in a class apart, as in this country the farmer makes his living out of milk and pigs almost exclusively.

The second group contains farms in which crop growing is the main interest. Here have also been included certain groups of farms in the South of Sweden, in Lithuania and Poland, where crops are an important but not the dominant factor in the gross returns. This has been done in order to differentiate the farms in Sweden and Austria, which grow cereals and sugar beet, from those which depend almost exclusively on profits on live stock. The farms in Lithuania and Poland are also used on a large scale for growing wheat and hoed crops and they also rightly figure here.

The farms in Germany which grow cereal crops obtain a gross return from pigs, expressed as a percentage of the total, less than that of the farms which are chiefly occupied with livestock production. Again, in proportion to the total gross return, the return from pig-fattening is of less account in the farms in Germany which grow sugar beet; where live stock is the chief interest, the reduction in the percentage for milk production is less marked, in fact it is very little changed. Sugar beet waste is fed to sheep in Germany, where the total head is comparatively high, in those regions where sugar beet is grown.

In Austria and in Sweden stock raising is of less importance for the farms which grow cereal or sugar beet crops than for those which are more particularly concerned with live stock products. A corresponding reduction in the percent-

ages for milk production is to be noted when the gross return percentage from pig fattening is relatively high.

In Overijssel, on farms which are mainly occupied with live stock products, 90-97 per cent. of the gross return is derived from animal husbandry; farms which grow cereal and hoed crops on the other hand obtain 87 per cent. of their gross return from this source and pig-breeding is in practice an inconsiderable item. In Lithuania and in Poland farm management is similarly organised A third of the gross return is provided by the crops, a fifth by pig fattening, a second fifth by dairy farming and almost another fifth by stock breeding.

It may be stated that in Europe the methods used for turning to account the resources of the soil are almost identical for all countries; according to the region and its prevailing natural conditions, the peasant inclines either to stock or to crop farming though not to single product farming. There are certain regions and countries where crops for industrial uses (e. g., the fen lands of Overijssel), milk production and pig fattening (e. g., Denmark) occupy practically the sole attention of the farmer, but there again live stock or certain crops used for the requirements of the farm are also to be found. Speaking in general terms, the European farm is complex in character. It possesses large stock giving regular returns and stock for breeding, pigs, poultry, etc , a system of crop rotation, supplying products used by the animals which serve the purposes of the farm or are sent to market. It is, in fact, the offspring of the patriarchal agriculture of former days. It is quite true that the peasant no longer endeavours as in the past, to provide mainly from the land which he possesses for all the requirements of his family; agriculture has been industrialised more or less rapidly according to the particular country, but it has not changed its original character. It has employed the means which modern science has put at its service in order to increase yields and certain yields in preference to others, but it has always sought to obtain from every kind of resource it possesses the highest total return. Even though it may be impossible, economically speaking, to draw a clear distinction between the results given by the various branches of a farm undertaking, it is in any case possible to see how far, for example, in given conditions of production, pig fattening is successful, and highly important confirmation can be obtained by following the success or otherwise of pig farming over a certain sequence of years. An endeavour is being made to obtain information on the subject of pig-fattening in the United States in those regions where maize is cultivated solely as a feed for pigs, and it will then be possible to see whether, in regard to pig fattening, the results obtained in America are better than those for Europe and, at the same time, whether a completely industrialised form of agriculture is more profitable than another.

It is therefore intended to take up, within the sphere of farm economy which properly pertains to the Institute, a thorough study of the conditions in which pig fattening is carried out in all those countries which supply information on the economic results of pig fattening, adequate for the purpose in view.

Jos. Deslarzes.

AGRICULTURAL POLICY AND THE CRISIS IN POLAND

Part 2 (*)

§ 3. — POLICY FOR COMBATTING THE CRISIS IN POLAND.

The problem of the agricultural crisis in Poland may be regarded as that of raising prices of agricultural products or rather as the problem of adjustment of costs of agricultural production to the level of agricultural prices. In Polish policy the price decline, resulting from the situation of the world agricultural market, has been adopted as a basis of operations. In other words the price decline is accepted as an irrevocable fact, at least for a period of considerable duration. Very naturally therefore the principal instrument for combatting the agricultural crisis has had to assume the form of adjustment of prices of manufactured goods, of indebtedness, of fiscal charges, of wages and other factors in the costs of agricultural production, to a price level of agricultural products comparable to that of the world market. The object of the national policy has, in fact, been an adjustment of the price level on the internal market of Poland to the conditions brought about by the present crisis, while however modifying certain effects of the fall in prices, especially in the sphere of finance. A policy of deflation has been adopted and the object of endeavour since 1930 has been to find a way of ensuring adjustment of prices to the world level without affecting internal capitalisation, which is regarded as the basic element in all lasting economic reconstruction of the country. Since the very rapid fall of agricultural prices has been accompanied by a much more gradual fall in prices of raw materials and manufactured goods, the object of the national policy has been to reconcile these two levels, and to adjust the other factors of production costs, such as fiscal charges, railway rates and workers' wages. Apart indeed from such adjustment of price levels no lasting equilibrium would have been attainable, and the economic expansion of the country in respect of exports would have been attended by immense difficulties. None the less it will be readily intelligible that a policy directed towards such adjustment, while at the same time firmly resolved on losing nothing of the results of internal capitalisation, must inevitably encounter serious difficulties and opposition. The way chosen however seemed to be the only one likely to leave the country, after accomplishment, in a position of economic equilibrium and permanent well-being.

Three methods have been followed by Polish policy with the object of attaining the desired result : that of maintaining a level of agricultural prices, such as, in the given conditions, appeared to be the minimum necessary for

(*) The first part of this article appeared in the Bulletin of April 1935 (No. 4, pp. 150-161).

preserving the country from a general failure of farms; that of adjusting costs of agricultural production to the level of the prices of agricultural products, and that of remedying the financial situation in which the farmers had found themselves at the beginning of the crisis, as the consequence of the process of intensification of production, their short term indebtedness and the very rapid fall of agricultural prices.

A. *Measures Taken in regard to Agricultural Prices.*

As the object of the Polish policy was to adjust the equilibrium of the national economy to the level of the world agricultural prices, the problem presented itself of modifying as far as possible the results of a not too far reaching deflation. A general statement has already been given of the causes which decided Polish economic policy to choose the method of thorough going deflation, and any further explanation would seem to be superfluous.

If, however, the adjustment of the price level on the internal Polish market to the level of world prices remained the final object desired, the internal economic conditions required a modification of the effects of a too rapid adjustment, especially so as to avoid endangering the financial structure of the country. Since the general farm indebtedness had frozen a large proportion of the financial resources of the country, it was important not to bring about, by a too rapid process of deflation, the liquidation of farm indebtedness by the method of sales by auction and bankruptcy which would have become universal during the transition period, before the costs of agricultural production had become adjusted to the level of the prices of agricultural products. While lowering the level of production costs, it was essential to maintain a reasonable level of agricultural prices so as to be able subsequently to direct the whole equilibrium towards a lower level.

The methods selected for preventing the agricultural price level from falling below the level regarded as a minimum were those of export premiums and of an intervention on the internal market. The function of the former was to check the fall of internal prices to the level of world prices, a level which had been very seriously affected by the international dumping. If the average cereal prices c.i.f. Hamburg are compared with the Warsaw quotations (Table VI), it will be seen that the Warsaw prices are slightly higher than the Hamburg, and that the premium had covered with an excess the difference in the transport costs from the internal market to the consumer in the country of destination. The export premiums have varied in value from one period to another, also they have been assigned to a variable number of agricultural products from one season to another in accordance with the situation of the internal market. For the whole period under review here the premiums were granted for rye and for bacon, while for wheat, barley, oats and other products they have been granted only from time to time, when it has been calculated that the production has exceeded the internal demand, and when, as a result, the internal prices

showed a tendency to be affected by those ruling for export. When the national production of one or another cereal did not exceed the internal consumption, a prohibition or at least a regulation of imports ensured the maintenance of the required level of prices. The export premium varied in value from 4 to 6 zloty per quintal in the course of the period under review.

The purpose of the interventions on the internal market had not been to raise prices, this being too costly a method, but to eliminate the seasonal price movements. Owing to the serious financial position of the majority of farms the sale of products immediately after the harvest was excessive with the result that the seasonal variations of autumn and spring prices were very marked. In order to stabilise prices throughout the year an organisation was set up with the title of " State Establishments of Agricultural Industry and Crop Products " to which was assigned the capital required for intervention. This organisation was expected to adjust the demand to the seasonal variations in supply and thus to stabilise prices. The surplus of purchases are exported at current prices. An agreement between private exporters and the Establishments in respect of prices however removed the influence which this organisation might have exercised on the level of export prices. Permanent organisations were also expected to bring the quantities exported by the Establishments into relation with contemporary conditions of the export market. Without having accumulated any considerable stocks of cereals the Establishments had been able to effect some modification of the seasonal variations in the prices of cereals on the internal market, which had decidedly influenced the financial situation of the farms.

On the other hand, in order to avoid an abnormal supply in the autumn months which would have necessitated disproportionate interventions, credits guaranteed by the cereal stocks of the farms were arranged. These credits, granted at the lowest possible rate of interest under Polish conditions, ensured financial resources to the farms without the necessity of any excessive sale of agricultural products immediately after the harvest. The amount of these loans varied from year to year as also the terms under which they were granted. The sum that could be borrowed corresponded to 60 to 70 per cent. of the value of the cereals on which the credit had been secured, and the rate of interest was 6 per cent. per annum. The credits were payable in instalments in the course of the months from January to June. In this way the intervention of the Establishments was greatly facilitated, and the credits and the organisation should be considered as fulfilling a similar purpose.

B. *Lowering of Production Costs.*

As already noted in the course of examination of the conditions of the agricultural crisis in Poland, the decline of agricultural prices had been much more rapid than that of manufactured goods, wages of farm workers and other factors in the costs of agricultural production. A far reaching consideration

has been given by the national policy to the adjustment of these various factors to the level of agricultural prices. The problem has been the subject of discussions in the economic press during the last three years, and, more essentially, the objective of several measures taken by the Government. The problem itself, which touches nearly all the branches of the economic activity of Poland —the adjustment of one factor necessitating the adjustment of a whole series of others—had been undoubtedly one of the most difficult of solution. Apart from the wages of farm workers, a problem which was of importance only in the case of farm holdings of over 20 hectares, and apart from the prices of manufactured goods, the costs of agricultural production consist largely not only in interest on debts but also in fiscal charges and those imposed by social legislation. The process of adjustment necessitated therefore the adjustment of all these different factors in the production costs of farming and involved certain difficulties which could not be overcome except by lapse of the necessary time. The objective of this adjustment has thus been pursued stage by stage by the Polish policy. In the light of our present knowledge it is possible to estimate the results obtained, results which are in no way final, but which, according to official statements, represent a halfway stage and which, it is intended, shall go further. The reduction of State charges and the modification of the fiscal system in respect of agriculture will receive the first mention in connection with the consideration of the measures taken for setting in order the finances of the Polish village. There will follow the discussion of the lowering of the prices of commodities produced under cartel conditions, and the lowering of the prices of artificial fertilisers of Polish origin, and finally the reduction in the wages of farm workers, whether regular or seasonal.

All these factors have followed more gradually the fall of agricultural prices. This is fully intelligible, not merely because the agricultural crisis has been more acute than the crisis in the other branches of economic activity, but also because the economic structure of agriculture is less complex. A large proportion of the costs of agricultural production necessarily present very great difficulties in rapid adjustment to a lower level. Their adjustment was the more difficult in that the rapidity of the fall of agricultural prices did away with the adjustment results obtained. The more rapid was the fall in agricultural prices, the greater became the relative difference between the level of these prices and that of production costs. The two items however tended towards a common level, although at a differing rate of speed. The stabilisation of prices of agricultural products in the course of 1933, a stabilisation which one is justified in regarding as definitive, had this result, *viz.*, that afterwards every decline in the level of the factors constituting the costs of agricultural production becomes also a diminution in the ratio between agricultural costs and prices. Table VII shows this very clearly. From 1929 to 1932 the yearly price decline of products sold by the farmers averaged 12.8 per cent. of the 1928 level, while the price fall of commodities purchased by farmers averaged 4.6 per cent. only. In 1933 the price fall in products sold amounted to 6.3 per cent. of the same level, while that of commodities purchased was 8.5 per cent.

(C) *Improvement of the Financial Situation of the Farms.*

As has already been emphasised in the first part of this article, the farms in Poland were heavily indebted in the course of the years 1927 to 1929. This indebtedness had been covered partially only by long term credits, while the large proportion of the indebtedness was in the form of short term credits. The rapid fall of agricultural prices had further increased the real value of the indebtedness of the farms expressed in terms of agricultural products, so that the burden of debts became heavier, not merely owing to the decline in profits and the difficulties of meeting the short term credits from normal resources, as had been done in earlier years, but also because the real value of the indebtedness had increased. A policy which considered as indispensable the maintenance of a price level of 40 to 50 per cent. lower than that which existed in the period in which the farms had contracted the indebtedness, was naturally compelled to contemplate the results of the deflation in the sphere of the solvency of the farms.

For the end of the year 1932 the Ministry of Finance had established a statement of the indebtedness of farms in Poland; this is given below and will later be examined more closely;

TABLE IX. — *Indebtedness of Farms in Poland on 31 December 1932*

	Millions of złoty
1. Long term credits	2,543
2. Short term credits	1,724
3 Taxes and other charges	354
Total indebtedness . . .	4,621

According to estimates made, this indebtedness in 1933 –if normal conditions of payments had prevailed—would have involved interest amounting to about 457,200,000 and amortisation of capital amounting to 249,700,000, or a total of 706,900,000 złoty (1).

A more exact explanation of these figures seems required. Firstly, out of the total amount of the long term credits, about 700,000,000 złoty represented private mortgage loans for relatively short periods. Also the rate of interest on

(1) See: Michel WIERUS-KOWALSKI, in the "Rolnik Economista" the organ of the Union of Agricultural Chambers and Organisations of the Polish Republic

this portion of the long term indebtedness had been relatively high, averaging 12 per cent. per annum. The remainder of the long term indebtedness was divided between the agricultural long term credit institutions and the funds administered by the State Agricultural Bank, and this remainder was charged with a rate of interest of 7 to 8 per cent. on an average and with a rate of amortisation of 2 per cent. yearly. The short term credits were divided equally between credits granted by banking institutions and credits granted by different branches of economic activity, under the form of commercial credits. The periods for which these credits had been granted varied from three months to two years.

In such conditions when the value of Polish agricultural production amounted to 4,300,000,000 zloty, the solvency of the farms became a problem of the greatest importance. The long term credit granted to agriculture was estimated at more than 60 per cent. of the issues on the internal market, while the short term credit granted by the banks amounted to a little more than 55 per cent. of the total activity of the banks in the sphere of short term credit. In the conditions of the Polish money market, when the results of internal capitalisation had been once destroyed by the war and once again by the inflation of 1921 to 1924, the insolvency of the farms threatened to destroy for a third time what had been gained during more than seven years of economy.

At the beginning of 1932 the Polish Government decided to inaugurate an institution, the object of which was to organise a policy in view of the financial recovery of the farms. It was set up in the first place as an arbitration court and had been granted certain prerogatives as the case arose. In its present form it includes a central bureau, offices in all the administrative areas and all the sub-prefectures, the competence of the hierarchical grades being well defined. This organisation was set up at the time of the first series of laws on agricultural finances, especially the laws on the agreements between farms and creditors, on the parcelling of the land of indebted farms, on the segregation of mortgages and on the lightening of fiscal burdens in respect of farms with arrears payable to the Treasury and to various social compulsory institutions. The series of laws, which have just been enumerated by the purpose served in each case, came into force in the course of the period January to April 1932, and it is to that period that should be referred the first efforts of the Polish policy in view of the financial conditions of the village.

The first series of laws related to the problem of the insolvency of farms. More precisely, the object of all these laws was to protect farms against the pressing demands of creditors which might have led in the given circumstances to a liquidation of a large proportion of the farms, the current liabilities of which did not exceed even 30 to 40 per cent. of the assets. In the prevailing conditions, when the credit restrictions, both on the side of the banks and on that of private creditors, were becoming increasingly marked, the farms were faced with the impossibility of any extension of short term debts which had fallen due, and, in view of the absence of floating capital and the heavy fall in profits, with the impossibility of meeting their obligations. Under the existing legal system, the creditors were empowered to demand a compulsory liquidation, which, with the general economic conditions prevailing, would satisfy, in the

majority of cases, the demands only of a section of the creditors. The law prescribed in fact that the assets of the farm realised at the time of a forced liquidation must be used to meet in turn the claims of the State, farm workers' wages, mortgage debts and finally the short term debts, current accounts at the banks and indebtedness to private individuals. In the majority of cases the capital obtained on forced liquidation was sufficient only to meet the claims of creditors with prior right to levy distress and not to pay off short term debts. Also, owing to the absence of floating capital on the money market, the cases became frequent in which the agricultural long term credit institutions remained the owners of the farm, in default of purchasers, and thereby found themselves threatened with insolvency as directly engaged in agricultural production. A special law which came into force in March 1932 prohibited forced liquidation of a farm in the case when such liquidation did not ensure the realisation of at least twothirds of its estimated value. This law put an end to a situation in which the compulsory liquidation of a farm, with debts not exceeding 30 to 40 per cent. of the assets, did not cover more than a limited proportion of the debts. A further law, enacted at the same time, introduced an individual moratorium for farms the indebtedness of which amounted to from 40 to 75 per cent. of the estimated value. In this case, the owner had the right to claim judicial supervision. The court appointed a trustee who assumed the management of the farm, and met, as far as possible, the creditors' claims on the property. The court was also empowered to fix the period of the individual moratorium, which depended on the development of the financial situation of the farm which had obtained the right to a moratorium. By a special law it became possible to improve this situation by means of the parcelling out of a part of the farm holding, and with the capital so obtained to meet a proportion of the indebtedness. Special credits for this purpose were opened by the Agricultural State Bank which administered the Treasury Funds intended for the economic reconstruction of agriculture.

Thus during the first phase of its activity the Polish policy had prohibited by a series of laws the forced liquidation of farms in the cases in which they were not in a position to realise a fair proportion of the assets of the property, and had moreover introduced a system of individual moratoria. The extreme elasticity of this system made it possible to treat each case differently according to the conditions of any particular farm. While protecting the farms against undue pressure from the creditors, the laws enacted ensured to these latter the payment of their claims, which was in no way ensured by the existing legal system, especially in the case of creditors without prior right to levy distress. In this way the first phase of the endeavours to surmount the financial difficulties of the village ensured also to the creditors of the farms the full payment of their claims.

The lightening of the fiscal charges should next be considered. Apart from the exemptions granted to farms in respect of taxation arrears, the measures taken prohibited in a series of cases the recovery of taxes by compulsory methods. Special exemptions were allowed in respect of cereals intended for sowing, of cereals not yet reaped, and of the indispensable farm requisites such as horses,

cows, implements, etc. Also these exemptions facilitated the payment of the arrears due by diminishing the sum payable, if paid within the prescribed periods.

The first stage of the plans for improvement of the financial situation of the farms had so to speak exhausted the negative aspect of the problem. A measure of financial relief was thereby ensured to the farms by permitting delay in the payment of debts, the conditions for carrying on the normal farm activities were ensured to farms indebted up to 75 per cent. of their estimated value; and to the non-privileged creditor the payment of their claims in full was assured. The results of the enactment of the laws dating from the first half of 1932—laws relating to debts originally incurred before 15 October 1931—had rendered easier the conditions of agricultural production, but at the same time by their action a part of the capital invested in agricultural production in the course of the years of prosperity had become frozen. The creditors had been assured of the payment of the debts due to them, but the period within which the payment should have taken place, while delayed, had not been in any way defined, and in consequence certain difficulties on the market of short term capital had arisen. On the other hand, the financial conditions of the farms were shown to be of a homogeneous character in respect of certain problems, a fact which suggested the possibility of resolving them on general lines, in place of the individual moratoria which had been introduced. The question of amortisation of long term credits was one of particular importance. The farms in the conditions of 1932 were, with certain exception, faced with the practical impossibility of making in addition to interest payments, also relatively high, payments on account of the capital of the long term debt as well as the payment of the short term debt. Fresh tasks were imposed upon the Polish policy and these form the second stage of the endeavours undertaken.

With a view to the release of the short term credits frozen on the farms, a banking institution was set up, with the function of converting these debts into long term liabilities. The necessary capital was supplied by the State banks, and the bank began operations in the course of 1933. The categories of debts which could be converted were defined in accordance with the nature of the indebtedness and with the financial position of the farm which had been accorded the opportunity of such a conversion. At the same time, in the course of 1933, a general moratorium had been introduced relating to the payment of the capital of the mortgage debts of farms and this moratorium was rendered more effective by the conversion of short term indebtedness. In particular the maximum rate of interest was limited to 6 per cent., while the rate paid for the long term credits granted by the mortgage credit institutions and by the State Agricultural Bank was reduced to 4 to 5 per cent.

Within the scheme for a general moratorium and for the conversion of the short term debts into long term liabilities, the individual moratorium was maintained as a form of temporary assistance.

In present conditions it may be assumed that the general character of the steps taken to bring about financial relief for Polish agriculture will not be greatly modified. The conversion of short term into long term credits will finally bring

to an end the dangerous situation created by the indebtedness of Polish agriculture. The measures taken to enable the farmers to meet liabilities contracted during the period of relative prosperity, particularly the moratoria granted to individuals and the protection of the farms against compulsory and inequitable liquidation, have reintroduced normal conditions of farm work. It remains only to await the final adjustment of the costs of agricultural production to the prices of farm products, in order to consider the problem of the crisis in Polish agriculture, in so far as it relates to internal conditions, as resolved. There remains the question of the possibility of finding foreign markets for the surplus products; this problem which wholly transcends the limits of the possibilities of the national policy is quite naturally linked up closely with the world crisis and with the development not merely of the economic situation, considered as a phenomenon of conjuncture, but also in its aspect as a problem of reconstruction.

André JALOWIECKI

INSURANCE AGAINST LIVE STOCK LOSSES IN FRANCE

In 1933 the following Insurance Societies in France were engaged in Live Stock Insurance operations:

" L'Avenir ", Société d'assurance mutuelle, founded in Paris in 1875

" Société Générale d'Assurances Normandes ", a mutual insurance company, established in 1908 at Rouen

" La Bienfaitrice Agricole ", Société d'assurances mutuelles, established in 1920 at Paris

" Le Bon Laboureur ", Société d'assurances mutuelles, established in 1855 at Dreux (Eure-et-Loire)

" Cultivateurs Réunis ", a mutual insurance company established in 1897 at Nantes

" Fédération des Agriculteurs Français ", a mutual insurance company established in 1905 at Paris.

" Fédération Nationale Agricole Commerciale et Industrielle ", a joint stock insurance Company, founded in 1908 at Paris

" La Libérale de France ", a mutual insurance company established in 1914 at Montceau-les-Mines

" La Mutuelle Régionale Agricole de Chartres ", a mutual insurance Company established in 1873 at Chartres under the title of: " La Garantie Mutuelle d'Illiers "

" La Maternelle ", a mutual insurance company established in 1854 at Dreux.

" La Mutuelle Percheronne ", a mutual insurance company established in 1898 at Nogent-le-Rotrou.

" La Nationale ", a limited liability insurance and re-insurance company established in 1920 at Paris.

" La Prévoyante ", a mutual insurance company established in 1894 at Souppe.

" La Providence ", a limited liability insurance company established in 1881 at Paris.

" Union Fédérale de France ", a mutual insurance company established in 1898 at Paris.

" Almelo ", a limited liability insurance and re-insurance company established in 1923 at Paris.

" L'Union Protectrice ", a mutual insurance company established in 1909 at Paris.

" L'Assurance Hippique Française ", a limited liability insurance and reinsurance company established in 1920 at Paris.

" Société Alsacienne et Lorraine d'Assurance Mutuelle contre la mortalité des Chevaux ", established in 1919 at Strasburg.

" La Mutuelle de Poitou ", a mutual insurance company established in 1908 at Poitiers.

" La Réparation ", a mutual insurance company established in 1912 at Bordeaux.

" Mutuelles de Turf, des Éleveurs et Agriculteurs Français ", a mutual insurance Company established in 1921 at Maisons-Lafitte.

" Le Rhône ", a mutual insurance company established in 1918 at Lyons.

" L'Urbaine et La Seine ", a limited liability insurance company established in 1880 at Paris (1).

In addition to the companies named in the above list, there is also a large number of small mutual agricultural insurance societies, commonly known as *mélinettes*, which deal with live stock insurance. On 31 December 1928 there were 6,470 societies of this type (2).

Among the joint stock and mutual insurance companies enumerated, the first to undertake live stock insurance business in France was *La Société d'Assurance Réciproques*, which was founded in 1803 and dissolved in 1838. Next followed *La Société des Cultivateurs* in 1838, *La Caisse Générale des Assurances agricoles* in 1856 and *L'Etable Charentaine* in 1858. These three companies shared the same fate as the first mentioned.

According to a table published in the *Argus* in 1906, there were in France 12 insurance companies, which dealt with this class of business, with a total issue of some 50,000 policies and a total value of the insured stock amounting to 85 million francs. The oldest established of these Companies were *L'Union*

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(1) *L'Argus*, an international insurance publication, of 5 August 1934 – Annuaire des sociétés d'assurance opérant en France, 1934, offices of *La Semaine*.

(2) Ministry of Agriculture: Report to the President of the French Republic on the work of Agricultural Mutual Insurance Companies in 1928 – Annales de la Mutualite et de la Coopération agricole January 1932, p. 33.

Beauceronne at Pithiviers and *La Maternelle* at Dreux both founded in 1854, while the two most important were *L'Avenir* and *La Mutuelle d'Illiers* (1).

Both the limited liability insurance companies and the mutual societies are governed as regards their constitution and operations by the highly important official regulation of 8 March 1928, which abrogated and took the place of the regulation of 22 January 1868, adopted when bringing into effect article 66 of the Law on Companies of 24 July 1867 (2). The Decree of 1922, which, together with the regulation of 1868, constitutes the common charter of the insurance companies, contains certain provisions in the articles of association, which are common to the limited liability and also to the mutual companies, together with the special rules applicable to the respective types of company.

The Decree of 8 March 1922 not only prescribed rules to be followed as regards the actual constitution of the companies, but also made the regularity of such constitution dependent on the due observance of certain prescriptions, having special reference to their relations with third parties. Most of these prescriptions were repeated and reaffirmed in the highly important Law of 13 July on the Insurance Contract.

The limited liability and the mutual insurance companies are both alike required to include in their articles of association and in the general conditions of the policies they issue a certain number of provisions which are regarded in the Decree of 8 March 1922 and in the Law of 13 July 1930 as fundamental.

The Decree of 8 March 1922 *inter alia* lays down similar conditions for both classes of company in connection with their responsibilities in the matter of the inventory and balance sheets, which must be provided each year for the Ministry of Labour under the heading of "*commissions excomptées*", and also of the initial expenditure incurred for establishment and equipment charges, of the constitution of a reserve fund and of the investment of their funds.

As regards special provisions for each type of company, limited liability companies as well as the limited partnership share companies (unlimited liability companies or limited partnership companies as also private individuals are not allowed to transact insurance business) are subject to the terms of the Law of 24 July 1867 and of the later laws, whereby it was modified and supplemented.

Apart however from the general legislative provisions relating to limited liability companies, there are also special provisions having reference to companies which deal with insurance business, which are contained in the Decree of 8 March 1922. For example, limited liability companies are required to have a capital of not less than a million francs; at the same time such companies are bound to deduct each year at least 20 per cent. from their net profits to build

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(1) EHRLICH: Viehversicherung in Frankreich: Zeitschrift für die gesamte Versicherungswissenschaft, 1909, p. 587.

(2) SUMIEN: Traité théorique et pratique des assurances terrestres et de la réassurance. Paris, 1931, p. 87 et seq.

up a reserve fund. The decree however makes such deduction optional when the reserve fund amounts to a fifth of the capital, and so on.

The mutual insurance companies are also subject to special regulations relating to their constitution, their objects, administration, the assumption of engagements, their officers, the rules as regards the declaration, assessment and payment of claims, reinsurance and the publication of their proceedings. The Law of 8 March 1922 prescribed that their articles of association should lay down the maximum annual contribution for which each member is liable, to meet the payment of claims. These articles may require each member to pay in advance some part of the annual contribution. The amount of this payment, of which the maximum is fixed by the articles, shall be determined each year by the General Meeting. Under the terms of the law, the articles also prescribe the maximum amount of the annual contribution which may be required from each member for expenses of management. Hence the case may arise where the claims transcend the maximum laid down. The decree of 1922 therefore allows the company an option, as distinct from an obligation, to establish a supplementary reserve fund from the excess assets, so as to make good the insufficiency of the annual contributions to meet losses. Any deductions made for this purpose shall not exceed 50 per cent. of this fund in any one financial year. If, however, in spite of these precautions, at the time when the accounts of the financial year are settled, the maximum amount of the subscriptions and the 50 per cent. of the supplementary reserve fund prove insufficient, the 1922 law prescribes that the indemnity payable to each person entitled to receive it shall be reduced by proportional hundredths.

A law dated 15 February 1917 contains important provisions regarding the control of reinsurance operations subscribed or effected in France or Algeria.

The mutual agricultural insurance societies are governed; (*a*) by the Law of 4 July 1900, whereby these institutions are exempted from the conditions prescribed by the Law of 24 July 1867 for companies and by the Decrees of 22 January 1868 and of 8 March 1922 on insurance societies; (*b*) by the Law of 21 March 1884 on Vocational Unions and by the Law of 12 March 1920, except in so far as any provisions of this law are incompatible with the working conditions a mutual insurance society; (*c*) by the Decree of 2 August 1923, as amended by the Decrees of 26 January 1930 and of 8 September 1933, having reference to the constitution and working of mutual agricultural insurance societies which make appeal for State subventions (1); (*d*) by the Law of 13 July 1930 referring to the contract of insurance so far as its provisions are not incompatible with the special rules affecting these societies (2).

The bodies may be local insurance societies in the usual sense or reinsurance societies of the first or second degree. A separate institution should be established for each class of risk. In the same commune one local society only for each

(1) Files of the Mutualiste agricole. Paris, October 1933, pp. 319 and 619 et sqq.

(2) SUMIEN: op. cit., p. 131.

class of risk is allowed to benefit from the State subventions. Where there are two mutual institutions in the same place, the one of which the articles of association were first lodged at the Mairie is given the preference, provided that its operations are properly conducted in accordance with the terms of the legislation in force.

The 1923 and the other amending decrees specify the institutions with which the surplus funds of the insurance and reinsurance societies should be invested and also the nature of the securities for the investment of their reserves. These decrees also define the terms and limits within which these societies may grant loans and underwrite the share capital of agricultural co-operative societies and of societies of general agricultural interest.

The Decree of 26 January 1930 prescribes the minimum limit of the annual contributions to be laid down in the society's articles:—

(*a*) for societies undertaking to make good at least 75 per cent. of the gross loss: 1.50 per cent. of the value of the stock in the case of societies which insure cattle only; 2 per cent. for societies insuring horses only; 1.75 per cent. for societies insuring both cattle and horses;

(*b*) for societies granting indemnities at a rate of less than 75 per cent. of the gross loss: 1 per cent., 1.50 per cent. and 1.25 per cent. respectively, following the above classification;

(*c*) societies insuring pigs pay at the rate of 4 per cent.

The indemnities payable are fixed by the articles but may not be at a rate of over 80 or less than 50 per cent. of the net loss. By net loss is understood the value of the animal lost as fixed by an expert valuer, after deducting the value of any part of the meat and carcase that can be utilised. The indemnity may also be reckoned on the value of the gross loss: in this case the meat and carcase remain the property of the society, which will dispose of them to best advantage in the common interest.

The live stock reinsurance societies can cover only such local societies as are constituted and operating in accordance with the provisions of the Decree of 1923 and of the later amending decrees; otherwise they will be ineligible for the State subventions.

The articles of association of the reinsurance societies must *inter alia* define the boundaries of the area in which they may carry out their operations and the conditions in which they participate in the losses of the affiliated local societies.

The reinsurance societies may either contribute towards all the losses sustained by the affiliated societies at a rate corresponding to the share paid by each society on the basis of the rate of contribution covered or else reserve their payments for the societies which have had to pay claims for a sum which exceeds a certain fixed rate. In the latter event, the articles of the reinsurance society must make provision for an adequate increase in the contributions paid to the local societies or for the raising of the point at which recourse may be had to reinsurance, or for an increase in the premium rate, whenever the local society has in three successive years had recourse to the reinsurance service.

The contributions of the local societies shall be not less than 5 per cent. of the annual insurance premiums. The articles of association of the reinsurance society

shall also fix the minimum period of affiliation for local societies at not less than 5 years.

Local mutual insurance societies may obtain State subventions, provided that they conform to the provisions of the Law of 4 July 1900 and of the Decree of 2 August 1923.

These subventions are of two kinds: (*a*) initial establishment subventions, allowed to societies which are in process of formation, in order to enable them to meet their expenditure on organisation and to establish their first reserve fund; (*b*) subventions to meet losses, granted to societies in active working, which have suffered abnormal losses during previous financial years; these subventions are allowed for the purpose of reconstituting their reserve funds.

The amount of the initial establishment grants is determined in relation to the size of the membership and the value of the stock insured. Application must be made within two years after the constitution of the Society and cannot be repeated.

The grants to meet losses are determined after taking into account the number of members, the value of the insured stock, the extent of the losses incurred, the position of the reserve fund, the rate of contributions and a grading mark given to each society in consideration of the relatively satisfactory character of its methods of working and administration.

The amount of the two kinds of subvention is fixed each year in accordance with the statement of accounts for the previous financial year and with scales fixed by the Minister of Agriculture, after consultation with the allocation Commission instituted by the Decree of 16 March 1920.

After the receipt of State subventions, these societies are subject to the inspection of such institutions, as are indicated in the Decree of 19 July 1919. They are also brought under the supervision of the general Inspectorate of the Finance Department.

The mutual reinsurance societies, if working in accordance with the terms of the law of 1900 and of 1923, may also obtain State subventions· (*a*) the "initial establishment" grant for the same purposes as in the case of the societies mentioned above (*b*) a "full activity" grant, intended to facilitate a reestablishment or increase in the reserve fund.

The "full activity" subventions are determined on the basis of scales which take into account the number of the local societies reinsured, the value of the stock reinsured, the extent of the share of reinsurance in the losses sustained by the local societies, the rate of the contributions paid by the insured parties, the reserve fund and the grading of each society in respect of the relatively satisfactory character of its working and administration. The Law of 1923 provides that no subvention is payable when the number of members and of the affiliated societies, the value of the stock insured or the number of the annual contributions are less than the minima prescribed by the relevant scales. In addition no subvention is payable to reinsurance societies which are not themselves reinsured in the second degree.

Mutual agricultural reinsurance societies of the second degree are governed by the general legislative provisions which have already been indicated as well

TABLE I. — *Live stock Insurance Companies · Statistics of Business Transacted in 1933.*

Name of the Company	Date of foundation	Head office	Number of persons insured	Value of stock insured	Assets	Claims	
						Number	Total amount paid
Avenir	1874	Paris	7,510	86,100,000	4,475,619	1,357	3,704,732
Assurances Normandes	1908	Rouen	1,255	14,969,000	681,978	605	365,119
Bienfaitrice Agricole	1910	Paris	3 012	1 188,050	863,084	294	288,960
Bon Laboureur	1855	Dreux	3,908	40 342,095	2,384,627	620	1,895,856
Cultivateurs Réunis	1897	Nantes	1 167	2,586,496	105,648	54	60,123
Fédération des Agriculteurs Français	1905	Paris	14 187	95,695,497	4,071,527	937	2,315,594
Fédération Nationale	1908	Paris	.	25,204,012	1,226,144	450	870,527
Libérale de France	1914	Monteeau-les-Mines	170	1,162,504	9,735	13	31,952
Mutuelle Régionale Agricole (2)	1873	Chartres	12,156	124,755,430	5,181,204	1,590	1,782,317
Maternelle	1854	Dreux	..	—	186 537	55	147,530
Mutuelle Percheronne	1898	Nogent-le-Rotrou	14,520	115 553,680	3,078,602	1,798	3,145,131
Nationale	1920	Paris	4,506	29,988,147	1,521,221	368	1,151,371
Prévoyante	1894	Souppes	1 490	13,693,050	646,347	154	508,575
Providence	1881	Paris	8,030	52,751 484	2,113,783	908	2,065,560
Union Fédérale de France	1864	Paris	11,479	81,103,770	3,328,063	1,207	2,074,333
Almelo	1892	Paris	5,000	41,000,000	1,753,988	538	992,918
Union Protectrice	1909	Paris	1,300	(1) 10,000,000	658,233	140	294,120
Assurance Hippique Française	1920	Paris	26,715	190,988,447	8,992,327	1,275	5,665,178
Société Alsacienne et Lorraine	1919	Strasbourg	7 000	37,000,000	3,546,896	846	2,386,961
Mutuelle du Poitou	1908	Poitiers	172	798,150	37,362	16	30,739
La Réparation	1920	Bordeaux	157	—	30,952	11	17,960
Mutuelle du Turf	1921	Malsons-Laffitte	26,578	90,000,000	3,317,080	780	2,236,116
Le Rhône	1918	Lyon	1,125	78,639,246	743,055	257	230,146
Urbaine et la Seine	1880	Paris	5,000	—	1,165,000	331	774,770
Total			157,037	1,133 521,198	50,120,518	14,624	36,636,588

(1) Approximately. — (2) Formerly known as the Garantie Mutuelle d'Illiers. This company confines its operations strictly to l'Eure-et-Loir and the neighbouring Departments.

as by those of their articles of association as approved by the Minister of Agriculture. They are eligible for State aid provided that they reinsure only such reinsurance societies as themselves work in conformity with the regulations referred to above.

Two tables are here given, of which the first contains statistics, showing the operations of the joint stock and mutual insurance societies during 1933 (1) and the second the data referring to their work for a period of 46 years (2).

TABLE II. — *Statistics of the past forty-six years.*

Years	Number of persons insured	Value of stock insured	Assets	Number of claims	Amount of claims paid
1888	16,540	34,160,511	975,258	2,539	666,271
1890	20,953	38,386,387	1,197,750	2,971	819,557
1895	18,787	37,010,695	1,259,413	2,508	804,204
1900	30,240	51,544,472	1,761,955	3,884	1,433,309
1905	42,430	76,772,422	2,690,804	4,991	2,264,849
1910	43,725	89,546,003	3,381,359	5,408	3,104,258
1911	51,052	104,213,611	4,008,550	6,060	3,255,488
1912	55,984	112,696,487	4,208,374	5,507	3,093,944
1913	68,246	142,575,508	5,101,572	5,763	3,512,670
1914-1919 (war period)	—	—	—	—	—
1920	70,255	343,073,723	11,368,647	5,240	6,858,611
1921	91,692	436,413,781	16,693,474	6,700	11,295,639
1922	88,861	430,732,056	18,029,213	7,568	12,717,442
1923	107,754	519,876,176	21,078,955	7,700	14,333,077
1924	88,291	605,261,399	23,553,326	7,623	14,973,312
1925	111,012	760,759,521	30,088,121	8,817	20,689,451
1926	124,119	906,353,874	36,618,289	10,394	25,796,033
1927	153,246	913,365,381	44,463,573	12,499	3[illegible],632,524
1928	141,356	1,113,465,350	46,862,223	13,688	34,167,513
1929	113,375	1,088,416,703	50,156,384	11,352	35,858,614
1930	136,159	1,204,553,902	54,184,551	11,982	37,810,330
1931	139,209	1,223,596,851	57,737,119	12,875	44,711,825
1932	116,639	1,202,676,397	53,418,863	13,878	43,240,605
1933	135,184	1,016,881,952	49,377,463	13,587	36,406,442

On 31 December 1928, the mutual agricultural insurance societies numbered 6,470 local mutual institutions and 80 regional or departmental reinsurance houses.

The Societies on this date had a total membership of 311,822 persons and the value of the stock insured was 2,101,040,060 francs. The number of the animals

(1) *L'Argus*, 12 August 1934, p. 1148.
(2) *L'Argus*, 5 August 1934, p. 1102.

insured was thus distributed: cattle, 707,480; horses, 201,481; other stock, 23,090.

The contributions paid amounted to 33,134,117 francs and the value of the losses sustained was 33,445,618 francs.

During the last two years there has been a slight increase in the number of the societies, but it should be observed that the number of members and the value of the stock insured have remained almost stationary (1).

A few figures will now be given to indicate the development of these societies.

In 1897 there were only 1,469 mutual agricultural insurance societies, with 87,072 members and stock insured, valued at 59,168,334 francs (2).

From this date onwards the rate of progress was considerably accelerated. In 1905 there were 5,765 societies with 318,146 members and insured stock valued at 330,545,529 francs, In 1910 the number of societies had risen to 8,380 with 456,561 members and stock insured for a value of 557,887,608 francs. In 1915 there were 9,998 societies with 506,003 members and stock insured, valued at 641,091,810 francs.

Naturally the war checked the upward movement. It started again however as soon as the war was finished, but at a much slower rate and in 1921 there were 10,212 local societies. After this year there was a marked falling off, and in 1922, the number was 6,995 and in 1928, after various fluctuations, 6,470 (3).

It should be remarked that, up to 1922, the statistics published by the Ministry of Agriculture included those societies only which had received a subvention from the Ministry and were therefore incomplete. On the other hand the figures supplied contained a considerable number of mutual societies, particularly live-stock societies, which had formerly received grants but which, owing to the war, had been unable to continue their activities, though the Department had not been so advised. In 1922 the Ministry began to make a fresh list of all the societies, including both those that had and those that had not received State assistance (4).

F. Arcoleo.

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(1) Report to the President of the French Republic, dated 15 July 1931, already quoted.

(2) Ehrlich: op. cit., p. 599.

(3) Files of the Mutualiste agricole. Paris, November.

(4) Ministry of Agriculture: Report to the President of the French Republic, etc., Paris 1924. - International Review of Agricultural Economics and Sociology, published by the International Institute of Agriculture, 1925, p. 122.

BIBLIOGRAPHY ON ECONOMIC AND SOCIAL QUESTIONS

ADERMANN (Dr Waldemar) Die russische Baumwollindustrie nach dem Kriege. — Osteuropäische Forschungen Otto Hoetzsch. Ost-Europa Edition. Berlin and Königsberg (117 pages)

The Russian cotton industry has made very appreciable progress in recent years. Manufactured textile products are now exported from the U. S S R. to foreign countries The interest of this book, which describes briefly and vividly the birth of this industry, its organisation and its development, is obvious.

Before the war the cotton industry occupied the first place in Russian industry both from the point of view of the annual production and from that of the number of workers employed. It owed its development mainly to the customs policy of the country, to the cheapness of labour, and to the vast market of domestic consumption The cotton industry in part developed at the expense of the linen industry, the products of which, although manufactured with home-grown raw materials, were too dear for the limited purchasing power of the population

The position of the cotton industry in the system of planned economy is set out very objectively by the author, who draws his information from Russian sources The principal points of view are clearly indicated and the reader obtains a very good general view of the situation of the cotton industry at the beginning of the first five-year plan of the U S S R

NOTICE

VIth INTERNATIONAL CONGRESS FOR SCIENTIFIC MANAGEMENT — The Sixth International Congress for Scientific Management will be held on 15-20 July at the Central Hall, Westminster, London, S. W I

An Agricultural Section has recently been formed in connection with this Congress under the auspices of the Royal Agricultural Society of England and other authoritative agricultural institutions in England. With this Section the Ministry of Agriculture is also associated

The question set down for discussion by this Section on 16 July is —

" Standardisation as a factor in Agricultural Development, including Standardisation of Equipment, Methods and Produce " The subject will be discussed under two headings (*a*) Mechanisation on the Farm; (*b*) the use of accounts in Farm Management

Further information may be obtained from the Secretary to the Congress, Mr. H Ward, 21 Tothill Street, London, S W. I

PUBLICATIONS RECEIVED BY THE LIBRARY

Books.

Statistic.

CHINESE COTTON STATISTICS ASSOCIATION, SHANGHAI. Cotton production in China 1926-29, 1930-33. Shanghai, 1930-34, 5 vols.

Political Economy.

DIE WIRTSCHAFTSJAHR 1934 IN DER TSCHECHOSLOVAKISCHEN REPUBLIK. Prag, Barkhaus Petschek & Co, [1935], 145 p.

Rural Economics.

EGGELING, H. U. B. HEIM. Wirtschaftslehre für Bauern, bäuerliche Werkschulen und Beratungsstellen. Berlin, P. Parey, 1934. 176 p.

LA FRANCE D'OUTRE-MER ET L'AGRICULTURE FRANÇAISE. Conférences organisées par l'Institut national agronomique. [Alençon], Impr. Alençonnaise, 1934, [255] p.

Co-operation.

PALAZOV, I. Теория и практика на кооперацията. София, [Печатн. Книгоиздат], 1935. VIII, 376 p., (Библиотека "Кооперативна просвѣта" при Съюза на популярнитѣ банки, No 7). [Theory and practice of co-operation].

Industry.

AMERICAN SUGAR REFINING COMPANY. Annual Report for the forty-fourth year, ending December 31, 1934. New York, [1935]. 56 p.

CATANIA. R. ISTITUTO SUPERIORE DI SCIENZE ECONOMICHE E COMMERCIALI. ISTITUTO DI MERCEOLOGIA. Annali di merceologia siciliana. Vol II. 1933-34. XII. Catania, Officina grafica moderna, 1934, XII, 319 p.

ZENTRALVERBAND DER TSCHECHOSLOVAKISCHEN INDUSTRIELLEN. LANDESGRUPPE FÜR DIE SLOVAKEI. Die Slovakische Industrie im Jahre 1934. Bratislava, Universum Aktiendruckerei, 1935. 156 p.

Prof. ALESSANDRO BRIZI. *Segretario generale dell'Istituto, Direttore responsabile.*

MONTHLY BULLETIN
OF
AGRICULTURAL ECONOMICS AND SOCIOLOGY

1935 **No. 6**

CORPORATIVE ORGANISATION IN ITALY

I. — The Origin of the Corporative System.

The persistent disequilibrium which showed itself between production and consumption on the one hand and between prices and costs on the other, revealing the existence of deep-seated causes of depression, proved, in Italy as in other countries, the necessity of taking not only temporary measures but also measures of a permanent and organic character: amongst these, the reorganisation of the economic system on a corporative basis occupies a place in the front rank. This reorganisation was preceded by another important reform which served as a basis (1) for it, namely, the grouping of the producing classes in vocational syndicates and the regulation of collective labour relations (Law of 3 April 1926, No. 563, and Regulations for applying it of 1 July 1926, No. 1,130).

This Law is based on the following principles:

(*a*) legal recognition of syndical associations and determination of their relation to the State;

(*b*) regulation of collective labour contracts;

(*c*) substitution of State justice (labour magistrature) for class self-defence, accompanied by the prohibition of strikes and lock-outs resulting from it.

The character of public bodies has been conferred on the syndicates which, accordingly, from mere class instruments have become bodies which, under the supervision of the State, exercise a certain number of functions of public interest.

The syndicate cannot be legally recognised unless it complies with certain specified conditions. It must in the first place contain a minimum number of members, proportionate to the total number of persons belonging to the class, and it must set before itself objects not only of an economic nature, but also of social and moral assistance, of instruction and education; further there can only be one recognised syndicate for each class of employers and of workers; the restriction to a single legally recognised syndicate is explained by the consideration that a multiplicity of syndicates would prevent a single representation of the class, dividing it into so many parts and rendering impossible that uniformity of treatment which must be assured to the persons belonging to the class. From this it follows that the syndicate represents all the persons within its area of operations belonging to the class for which it is formed; while, on the other land, membership

(1) See " The New Syndical Organisation in Italy ". *International Review of Agricultural Economics*, Year IV, No. 3, July-September 1926. International Institute of Agriculture, Rome.

of the syndicate is voluntary, the representation affects also the non-members, since these would otherwise remain without legal representation.

On the one side there are syndicates of employers, on the other syndicates of workers. This is the case for each of the great branches of economic activity.

Several associations of the first degree form a federation which combines all the employers or all the workers of a class in a given area (district, provincial, or regional federation) or of the whole country (national federation); several federations unite together to form a confederation.

Twelve confederations have been formed, that is, six confederations of employers and six of workers, in respect of the following branches: industry, agriculture, trade, sea transport, land transport, and banking. A thirteenth confederation has grouped artists and professional men.

It is the function of the legally recognised syndicates to stipulate the collective labour contracts which, when duly published, are fully effective in relation to all the employers and all the workers of the class to which the collective contract refers.

The conditions of labour are thus freely agreed upon between the representatives of the two parties. The contract, once stipulated, must be sent for publication to the government departments concerned, which are thus able to assure themselves that the contracts are legal. Beyond this, there is no intervention of the government in the making of labour contracts.

Employers and workers who do not observe the collective contract to which they are subject are legally liable in respect of non-fulfilment both to the employers' association and to workers' association which have stipulated the contract.

The collective contract, therefore, renders possible, as far as labour agreements are concerned, the conciliation of the interests of opposing classes, each represented by its own syndicate.

If agreement is not arrived at between the employers' syndicates and the workers' syndicates of a given class, the conflict of interest is brought for decision before the labour tribunal, set up by the law of 1926; this tribunal is formed by the ordinary judge who, when he is called upon to judge collective labour controversies, avails himself also of the opinion of experts.

But the syndical reform outlined above having, as we have seen, for its immediate purpose the organisation of the producing classes within the orbit of the State and the peaceful resolution of labour conflicts, obviously did not exhaust the economic field; the facts of production and distribution, which, owing to the crisis, had become more and more complex, remained outside its purview. In particular, in the matter of production, the work of regulation and organisation could not be entrusted only to the syndicates, which represent the interests of only one of the factors of production, but must of necessity become the task of a new type of organisation in which all the factors of production are combined under the direction of the State: to this type of organisation has been given, since the beginning, the name of "corporation."

Already in the Law of 3 April 1926, while Article 4 placed amongst the tasks of the syndical organisation "the increase and improvement of production," Articles 3 and 17 contemplated other organisations comprising the representatives

of the various factors of production, organisations which the Royal Decree of 1 July 1926 for the application of the Law defines explicitly as corporations (Article 42). This Decree, in fact, dedicates a whole chapter (Chapter III) to the legal regulation of the corporations, laying down that they are national in character; that they " group the national syndical organisations of the various factors of production, employers, intellectual and manual workers, for a specified branch of production or for one or more specified categories of undertaking; " that the corporation has no corporate existence but constitutes an organ of State administration; that it is the function of the corporation " to promote, to encourage and to assist all initiatives aiming at the co-ordination and the better organisation of production. "

The Labour Charter (1), which is dated 21 April 1927, defined even better the nature and functions of the corporation. " The corporations, " it laid down, " constitute the organisation by which are united the forces of production and they completely represent the interests of production. In virtue of this complete representation, the interests of production being national interests, the corporations are by law recognised as organs of the State. As representing the combined interests of production, the corporations can dictate compulsory rules for the regulation of labour relations and even for the co-ordination of production whenever they have had the necessary powers from the affiliated associations. "

A still more decisive step was taken by the Law of 20 March 1930, No. 206, on the National Council of Corporations, in which the Council is considered as the General Assembly of the corporations and the sections of the Council as corporations set up for the great branches of production. But besides the functions attributed to the corporations by the Law of 3 April 1926 and the regulations issued under that law, which were transferred to the sections, there were conferred on the Council as a whole numerous functions of an advisory nature and, in addition, the power to issue compulsory rules regarding rates of pay and professional services and—a fundamental point—" rules for the regulation of collective economic relations between the various classes of production. "

On the bases indicated, there followed a further development of corporative institutions, that is, an independent organisation of them and a more precise regulation of their powers and of their activity in the matter of production; this was accomplished by the Law of 5 February 1934, No. 163, of which we will now examine the fundamental principles.

II. — Constitution and Functions of the Corporations.

According to the definition given by the Head of the Government, the corporations are " the instrument which, under the ægis of the State, carries out completely, organically and in the general interest, the regulation of the productive forces, with a view to the development of the wealth, the political power and the

(1) See " The Labour Charter in Italy, " *International Review of Agriculture*, Year XVIII, No. 5, June 1927. International Institute of Agriculture, Rome.

well-being of the Italian people." They act as an organisation whereby production can discipline itself, being composed of the producers themselves, understanding by this expression not merely the employers of labour, but the workers, both being legally organised by classes in vocational syndicates, under the terms of the Law of 3 April 1926, No. 563, and of the Royal Decree of 1 July 1926, No. 1,130.

Corporations have been set up for great branches of production (Decrees of 29 May and of 9 and 23 June 1934) and classified in three groups: (*a*) corporations for a whole productive cycle, agricultural, industrial and commercial; (*b*) corporations for the whole productive cycle, industrial and commercial; (*c*) corporations for the productive activity of services. In the first group, which affects agriculture, are the following corporations:—

1. The Corporation for Cereals;
2. The Corporation for Vegetable-growing, Flower-growing and Fruit-growing;
3. The Corporation for Vine-growing and Wine-making;
4. The Corporation for Olives and Olive-oil;
5. The Corporation for Sugar Beet and Sugar;
6. The Corporation for Animal Husbandry and Fishing;
7. The Corporation for Timber;
8. The Corporation for Textile Products.

The second group also includes eight corporations: they are the Corporations for Construction, for Metal-working and Engineering; for Clothing; for Glass and Pottery; for the Chemical Industry; for Paper and Printing; for the Extractive Industries; and for Water, Gas and Electricity.

The third group includes six corporations: those for the Liberal Professions and the Arts; for Internal Communications; for Maritime and Air Transport; for Hotel-keeping; for Insurance and Credit and for Entertainments.

In so far as the first group is concerned, we note that each corporation, embracing a complete productive cycle, has within its purview the whole series of facts which go from the production of the raw material to the sale of the product. In the formation of corporations efforts have been made to respect, as far as possible, the unity of the various productive cycles and to group together in the same organisation the classes bound together by relations of exchange. Thus the Corporation for Cereals includes, amongst others, representatives of cereal growing, of the threshing industry, of the milling industry, of the rice industry, of the alimentary pastes industry, of the confectionery industry, of the baking industry, of the grain trade and of the trade in the various products of the said industries. It also contains a delegate of the agricultural experts, one of the consumers' co-operative societies and one of the artisans. The direct representatives of the various interests, the number of whom is always proportionate to the importance of the interests, constitute, together with the representatives of the Fascist National Party and of the experts, the Council of each corporation (1).

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(1) To give a concrete example, the Council of the Corporation for Cereals is composed of the Chairman and of 36 members, including 3 representatives of the Fascist National Party; 7 representatives of the employers and 7 of the workers engaged in the production of cereals; 1 representative of the

Thanks to this co-ordination of forces, while on the one hand it renders it easier to regulate the activities relating to every great branch of production, in the interests of individuals and of the general body of producers, on the other hand production is directly controlled.

The following tasks are entrusted to the corporations:

1. To issue general rules for the regulation of labour relations, as defined by Article 10 of the Law of 3 April 1926, No. 563;

2. To elaborate rules for the collective regulation of economic relations and for the regulation of production in the general interest; this is the most important power which makes of the corporation, as has been noted, the organisation through which the classes interested in production themselves control economic activity; the corporation exercises this function in pursuance of a proposal of the competent ministers or on the request of one of the affiliated associations, with the consent of the Head of the Government;

3. To determine rates for the economic services of the producers, as well as the scales of prices of consumption goods offered to the public in privileged conditions; this faculty of regulation has as its main object to enable the corporative organisations to intervene in cases where, by reason of the formation of monopolies or of the existence of privileged conditions in the management of property or services necessary for the community, their intervention is desirable or necessary in order to safeguard both the interests of the consumers and the superior interests of the national economy;

4. To formulate opinions on all questions which in any way affect the respective branch of economic activity, whenever that is requested by the competent public administration; the Head of the Government can, by Decree, lay down that, for particular subjects, the public administrations must request the opinion of the competent corporations; through this consultative function the collaboration of the economic classes with the State administration for the regulation of production will become more and more definite;

5. To make efforts to arrive at conciliation in collective controversies regarding labour; such efforts will be made by the corporation through the medium of the board of conciliation, composed of members of the corporation itself, chosen from time to time by the president, regard being had to the nature and to the subject of the particular controversies.

The rules, the collective economic agreements, and the rates above referred to, when drawn up, are subject to the approval of the General Meeting of the National Council of Corporations and become binding when they have been pub-

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employers and 1 of the workers engaged in the threshing industry; 3 representatives of the employers and 3 of the workers engaged in the milling industry, in the rice industry, the confectionery industry and the alimentary pastes industry; 1 representative of the employers and 1 of the workers engaged in the baking industry; 3 representatives of the employers and 3 of the workers engaged in the grain trade and in the trade in the other products above enumerated; 1 representative of the consumers' co-operative societies; 1 representative of the agricultural experts belonging to the liberal professions; 1 representative of the artisans. Amongst the representatives of the employers there are 3 representatives of the managers of undertakings, 1 for agriculture, 1 for industry and 1 for trade.

lished by a Decree of the Head of the Government. This is in order to prevent the said provisions from reflecting mainly the economic interest of one vocational category in contrast with the wider interests of the whole national economy.

The corporations, which are State institutions, are set up by Decree of the Head of the Government and are presided over by a Minister or by an Under-Secretary of State or by the Secretary of the Fascist National Party. The Decree by which a corporation is set up lays down of how many members the Council is to be formed and how many are to be nominated by each of the affiliated societies.

In the corporations in which classes belonging to different branches of economic activity are represented special sections can be formed. With this rule is closely connected another rule which provides for the formation of corporative committees for regulating economic activity relating to particular products. For example in connection with the Corporation for Textile Products, the formation might be contemplated of a Committee for Silk, in which all the economic circles interested in that product would be called upon to collaborate.

By instruction of the Head of the Government and for questions concerning different branches of economic activity two or more corporations may be convened together, and have, with respect to such questions, the same powers that are attributed to the separate corporations.

The National Council, as the body formed for the co-ordination of the corporations, will endeavour to harmonise their action.

The task of protecting the separate vocational classes has accordingly been extended, by the introduction of the corporative system, from labour relations to economic relations, that is, to the larger and more complex field of production.

But since the intervention of so numerous an assembly to approve every single act of the corporations would result in slowing down corporative activity, the Central Corporative Committee was instituted by Article 15 of the Law of 20 March 1930 on the reform of the National Council of Corporations. This Committee has the following tasks: (*a*) to co-ordinate the activity of the various corporations in the general framework of the national interests; (*b*) to replace, in the intervals between its meetings, the General Assembly for all deliberations regarding the corporative organisations; (*c*) to give opinions on questions involving the political direction to be given to syndical action in relation to the national problems of production. The Committee is composed, as laid down by the Royal Decree of 27 December 1934, No. 2,101, of the Ministers of Corporations, of the Interior, of Grace and Justice, of Finance, of National Education, of Public Works, of Agriculture and Forests, of Communications, the Secretary of the Fascist National Party and the Vice-Presidents of the 22 Corporations. It also includes the Presidents of the Syndical Confederations of Employers and of Workers, the President of the Fascist National Institute of Co-operation, etc.

III. — The Reform of the Syndical Organisation.

In tracing the plan of the corporative system, principles have also been laid down for the reform of the syndical organisation, principles of which the essential aim is to place the class associations in close contact with the corporative insti-

tution. The law having asserted the principle that each vocational class must have its own individuality and must participate directly in the corporation by means of its own representatives, in order to give voice to the interest of the economic group in question, it results that the associations linked together in the corporation must have syndical autonomy. It is, in fact, recognized that only by means of a direct current of relations between syndical class and corporation can genuine and effective expression be given to all the requirements, the aspirations and the conflicts of the economic groups which the corporation is called upon to ascertain and to conciliate within the wider framework of the interests of the nation.

But to attain this object it has not appeared necessary to suppress the confederations. Article 7 of the Law of 5 February 1934 lays down, in fact, that "the associations linked together by a corporation become autonomous in syndical matters, but continue to be members of the respective confederations."

The confederations have been reduced in number from 13 to 9, and will represent only the more important branches of productive activity (1).

The tasks of the confederations may be summarised as follows: to supervise the affiliated associations; to assure the co-ordination of the activity of the associations and the establishment and working of services of common interest; to watch over the economic and financial working of the associations; to encourage the formation of institutions for economic assistance, for vocational instruction, for moral and national education; to appoint representatives on all the bodies, committees and institutions on which their representation is contemplated or allowed; to proceed to the negotiation of collective labour agreements and agreements for the regulation of collective economic relations involving the general interests of the vocational classes incorporated in the affiliated associations.

As the functions, already indicated, of supervision of the affiliated associations must essentially fall within the competence of the State, they accentuate the character of the confederations as bodies to which functions of the State are delegated (2).

(1) There are four Employers' Confederations, *viz:* (1) the Confederation of Farmers; (2) the Confederation of Manufacturers; (3) the Confederation of Merchants and Shopkeepers; (4) the Confederation of Credit and Insurance Institutions. The Workers' Confederations are five in number, *viz.* (1) the Confederation of Workers in Agriculture; (2) the Confederation of Workers in Industry; (3) the Confederation of Workers in Trade; (4) the Confederation of Workers in Credit and Insurance Institutions; (5) the Confederation of Persons exercising a Liberal Profession and of Artists. On 31 December 1934 the Fascist Confederation of Farmers represented 2,058,266 farmers; the number inscribed was 712,697. On the same date the Fascist Confederation of Workers in Agriculture represented 2,744,072 workers; the number inscribed was 2,023,750.

(2) The organs of the confederation are: (1) a Council on a wide basis, comprising the managers of the affiliated associations and of the national syndicates and other representatives of the class, the main functions of which are to determine the general policy of the activity of the confederation and to form a judgement on the work carried out by the executive bodies by examining their moral and financial reports; (2) an executive committee, appointed by the council, which assures the continuity of the working of the confederation, particularly in regard to the administrative part.

The president of the confederation holds an important position. He has a wide range of duties, not only as the responsible head of the organisation, but also in relation to the function of the confederation as the link between the class associations and the central authorities of the State. His nomination, accordingly, rests with the Government.

The special characteristics of agriculture have made it desirable to form, in connection with the two agricultural confederations, technical and economic sections for the study of the problems of production and for co-ordinating the syndical action with the corporative action.

For carrying out their tasks in the different parts of the country, the confederations form offices of their own, called " unions, " with a sphere of action embracing sometimes a province, sometimes two or more provinces, which co-ordinate the work of the local organs of the national class associations.

The syndical associations combined together by the corporation are the national class federations, which, like the confederations, are corporate bodies, and which nominate representatives to serve on the councils of the corporations.

The Fascist Confederation of Farmers is composed of the following national federations:

1. The Federation of Landowners and Tenants Operating Farms;
2. The Federation of Landowners whose Lands have been let;
3. The Federation of Landowners and Tenants who Directly Cultivate their Lands;
4. The Federation of Managers of Farms.

The Fascist Confederation of Agricultural Workers is composed of the following national federations:

1. The Federation of Technical and Administrative Employees of Farms and Forestry Undertakings;
2. The Federation of Tenants and Metayers;
3. The Federation of Wage-earning Labourers and Day Labourers;
4. The Federation of Specialised Agricultural, Stockbreeding and Forestry Labourers.

The Federations have the following objects: to encourage the technical and economic development of the vocational class which they represent; to negotiate collective labour agreements or agreements for the regulation of the collective economic relations interesting the said class; to proceed, as we have said, to the nomination or appointment of representatives of the class in the corporations or organisations or institutions where such representation is contemplated or required; lastly, to take initial steps in the matter of assistance.

To render more practical and more rapid the attainment of the objects above-mentioned, the formation of provincial or interprovincial syndicates and of national syndicates is contemplated.

The formation of local syndicates is regulated with great precision, since on the local syndicate, the primary cell of the system we are studying, turns the development of the activity of the organisation. It has all the functions of the national federation except the administrative functions, and it has in addition the delicate function of the admission of members.

The local syndicate has as its organs a general meeting, a managing committee and a manager; through these it promotes the interests of the vocational class. In the local syndicate the class is called upon directly to study its own problems, to nominate its own managers, to discuss its own needs and to learn the principles of that collaboration in the sphere of national interests which forms the basis of corporative action. The local syndicate works through its constituent organs, the communal syndicates, in every place where even a small group of producers exists.

With the slight modifications above indicated and the changes made in the incorporation of some vocational classes (1), the syndical system has been adapted to the structure and working of the corporations.

In thus completing the construction of the syndical and corporative system the Government has re-affirmed the principle on which its working is based, which is that all individual interests must be subordinated to collective interests and that the well-being of individuals must be harmonised with the general welfare of the nation.

IV. — The Corporations at Work: the First Results of Corporative Activity.

Having thus explained briefly the constitution and the functions of the corporations, let us now see how they work in practice.

The President of the Corporation prepares, in the first place, the agenda of the subjects to be dealt with and transmits it to the general secretary of the National Council of Corporations, who submits it to examination by the Ministers concerned.

The agenda, with the remarks of the ministers, is then submitted to examination by the Head of the Government.

All the resolutions voted by the Corporation are transmitted to the general secretary of the National Council of Corporations, who arranges for communicating them to the departments and other bodies concerned.

The President of the Corporation has power to invite persons who are experts in the problems under discussion and the directors-general and other heads of branches of the Ministries concerned to attend the meetings of the council of the corporation, without, however, having the right to vote. He can ask the National Council of Research (2) or other technical bodies to give their opinion or to carry out inquiries regarding the problems that are being dealt with.

The Presidents of the national confederations of employers and of workers concerned can also attend the meeting and also, subject to the authorisation

(1) The Fascist National Syndicate of Agricultural Experts has been attached to the Confederation of Persons Exercising Liberal Professions and of Artists. See " L'organisation syndicale corporative de l'agriculture en Italie " by Prof. Franco Angelini. Rome, Imprimerie de l'Art de la Presse, 1935.

(2) This Council was formed in Italy for the co-ordination and direction of scientific research.

of the president of the corporation, the presidents of the National Institute for Foreign Exchanges, of the Fascist National Institute of Co-operation, etc.

The first corporation convened was that of animal husbandry and fisheries. The problems placed on the agenda were the following:

1. The defence of typical cheeses and the regulation of the voluntary consortia;
2. The regulation of the production and sale of milk for human consumption and of manufacturing milk and measures to increase the consumption;
3. Measures of insurance and social assistance on behalf of fishermen;
4. The renewal of the deeds embodying the collective economic agreement for the regulation of the sale of milk in the city of Rome;
5. The organisation of wholesale fish markets;
6. The regulation of the installation of motors in fishing vessels;
7. The relations between the owners of fishing vessels and the preserving industry, in view of an increase in the national production;
8. The national live stock production and the regulation of the importation of meat;
9. Examination of the condition of the tunny-fishing industry and of the market for tunny in oil.

On each of these questions, the secretariate of the National Council of Corporations had drawn up a special report intended to serve as a basis of discussion. The report contained a statement of the arguments and proposals of the syndical organisations concerned and of the competent ministerial offices.

In regard to the defence of typical cheeses and the regulation of the voluntary consortia, the corporation in question resolved:

1. That it is desirable, with a view to a more effective protection of the cheesemaking industry and of the typical cheeses of which there is a large sale, both on the home market and in the export trade, to adopt a mark which, while taking account of the intrinsic characteristics and of the composition of the cheeses, determined in advance by the organs of the State, should guarantee their quality and special traditional characteristics;
2. That these marks should be set up by voluntary consortia of recognised producers;
3. That the voluntary interprovincial consortia for the defence of typical cheeses must be confined to products the reputation of which on the home and foreign market exercises a preponderating influence on the conditions of the national cheesemaking industry (the " grana " cheeses, gorgonzola, pecorino, cacio cavallo, etc.);
4. That for each type of cheese only one consortium should be recognised, divided into sections corresponding to specified regions of production and to types of product.

The same corporation further recognised that it is desirable to promote, through the medium of the technical and syndical organs, action with a view to finding outlets for larger quantities of milk in other customary uses (the making of butter or cream, human consumption, the rearing of calves) and to regulate the distribution, particularly in districts where land improvement had

been carried out, of draught cattle and cattle for meat production rather than cattle specialised for the production of milk.

In connection with the production and marketing of milk for human consumption, live stock production and the regulation of the importation of meat, the Corporation of Animal Husbandry and of Fisheries deemed that it was desirable to improve the economic bases of the national stockbreeding industry and to encourage a better equilibrium between the two fundamental branches of animal husbandry, milk production and meat production, by assuring, amongst other measures, to these products prices that are equitable and are proportionate to the cost of production; by encouraging a large consumption as food of milk and its products; by attenuating the influence exerted on the home market by the importation of live stock and of meat from abroad; by improving the Italian breeds of live stock, especially from the point of view of production, and by valorising the products as far as possible.

The corporation decided to submit to the approval of the Central Corporative Committee the following measures:

1. The fixing of the percentages of fat which the different types of cheese must contain and the energetic repression of frauds in the use of margarine for the preparation of products intended for human food;

2. (*a*) Encouragement of the consumption of milk and regulation of the establishment and working of the " milk centrals, " which, as they must be regarded as institutions of a purely sanitary and public utility character, without any speculative object and without industrial profits, must be conducted on corporative lines by the classes concerned;

(*b*) Organisation in urban centres, where there is no milk centre, of consortia on a corporative basis, which shall direct and assure the production of milk for human consumption, as well as the distribution to the consumers;

(*c*) Express prohibition of the house to house sale of milk either by dealers or by producers;

3. To entrust to a corporative organisation supervised by the State the task of regulating the entry of live stock from exporting countries and the distribution within the country of the quotas of live stock to be imported, thus preventing the disturbance of the home market;

4. To fix quotas also for the importation of fresh, chilled and frozen meat, as well as of bacon, lard and processed meat products by determining the maximum quantity allowed to be imported each year, on the basis of the real requirements of the national food supply;

5. To regulate the live stock markets of the great centres of consumption, in such a way as to make it possible for the producers, whether isolated or in groups, to place their animals on the markets directly, avoiding any form of monopoly;

6. To reorganise the slaughter of live stock on more economic and more modern lines, eliminating charges that are not justified and waste of any kind;

7. To adjust the taxes on consumption in such a way as to make them correspond better to the present value of live stock, taking also account of the desirability of encouraging the consumption of the meat of cattle, sheep and

pigs and the products derived therefrom, which are at present more heavily burdened with charges, while other kinds of meat, like that of poultry, as well as meat pastes, are exempted, which offers considerable inducement to importation;

8. Revision of the present railway and maritime transport freights (live stock, milk, fodder, etc.);

9. To give a wider development to the organisations engaged in making experiments in animal husbandry and cheesemaking and to the laboratories for the analysis of dairy products with a view to the prevention of adulteration and frauds.

The Central Corporative Committee afterwards approved the conclusions reached by the Corporation of Animal Husbandry and of Fisheries (1) regarding the regulation of meat imports, of slaughter-houses and of markets, and invited the Ministries of Corporations, of Agriculture, of Finance and of Foreign Affairs to set up an inter-ministerial committee, on which the syndical organisations concerned should be represented, for the purpose of regulating the entry of live stock from exporting countries and the distribution within the country of the quotas of live stock to be imported.

In addition, other resolutions were adopted with a view to carrying out the recommendations which we have reproduced above.

The Corporation of Textile Products was the next to meet. The questions placed on the agenda were the following:

1. Problems relating to silk: (*a*) means of improving the production of cocoons and of maintaining and increasing amongst farmers interest in their production; (*b*) questions concerning spinning and reeling of silk; (*c*) questions concerning weaving and the use of pure silk or of silk mixed with other textile fibres; (*d*) export of silk and goods manufactured from silk;

2. Problems relating to flax and hemp: (*a*) possibility and advisability of extending the cultivation of hemp and flax; (*b*) methods and means of increasing the absorption of the home-grown raw material and of articles manufactured from hemp, flax, or from hemp and flax mixed, by the home and international market; (*c*) possibility of co-ordination with the use of other textile fibres;

3. Increase of the home production of wool;

4. Regulations for the unification of typical fabrics;

5. Determination of principles for the regulation of the retail sale of yarn.

In regard to the problems relating to silk, the Corporation of Textile Products decided, in view of the specially depressed condition from which the national silk industry is suffering, to call the attention of the Ministry of Corporations to the desirability of setting up a Corporative Committee for the regulation of the production of silk in its different branches, under the terms of Article 6 of the Law of 5 February 1934.

In regard to the problems concerning hemp. the Corporation, being convinced that the preservation and valorisation of hemp production is a national necessity,

(1) For the sake of brevity, we do not refer here to fishery problems.

took note of the new uses to which hemp is being put in the textile industry as a result of new methods and new industrial processes; it saw in these new uses the best way of increasing the production and utilisation of hemp and thereby replacing imported textile fibres, and it deemed it desirable that the researches and studies in this field should be still more actively pursued, not only by the industrial organisations, but also by specialised scientific and technical institutions; it further deemed it necessary to draw attention to the desirability of encouraging a greater utilisation of hemp, to attain which articles manufactured from pure hemp or containing hemp can usefully be substituted—in virtue of their qualities, of their resistance and their greater durability—for articles manufactured with imported fibres.

As to flax, the same Corporation expressed the opinion that, in order to bring about an increase in the national production, it was desirable to propose to the Central Corporative Committee: (*a*) that the present quota of 1,000 quintals of flax-seed allowed to be imported free of duty should be raised to 3,000 quintals, with a view to extending the cultivation of flax; (*b*) that the Ministry of Agriculture and of Forests should contribute, by the means at its disposal, to the setting up in the centres of production of scientific installations for the retting and scutching of flax.

With regard to the increase in the national production of wool, the Corporation affirmed: (*a*) that it is technically possible by the intensification of stockbreeding and the selection of stock in Italy and by the extension of stockbreeding in the colonies to attain a level of production which would satisfy to a greater extent the needs of the national industry; (*b*) that the economic problems connected with the increase in the flocks of sheep could only be solved if the valorisation of home-grown wool were preceded and accompanied by that of other products of sheepbreeding, more particularly meat and milk.

The Corporation afterwards took cognisance of a series of proposals for the increase of the pastoral industry in general, for the intensification of experimentation and of propaganda with a view to the selection of sheep as well as to the increase of the consumption of meat and of sheep's milk products, for a revision of transport charges on sheep and sheep-breeding products, etc.

The Central Corporative Committee examined the proposals summarised above and took the necessary decisions for carrying them out.

The Corporation for Sugar Beet and Sugar also met and discussed the following subjects:

1. Production of alcohol from sugar beet for use as motor fuel;
2. Fiscal policy in reference to the consumption of sugar;
3. Regulation of the cultivation of sugar beet;
4. Control of the production and trade of sugar beet seed·
5. Relations between the sugar industry and the industries which consume sugar;
6. Regulation of the selling prices of sugar.

Amongst the various conclusions reached by this corporation the most noteworthy was that by which a plan was proposed for the extraction of alcohol from sugar beet whereby the desired quantity would be gradually reached.

In regard to the fourth item, the Corporation affirmed the necessity of producing in the country all the seed necessary for consumption. It further pointed out the desirability that the production and distribution of the seed should be controlled by a consortium of producers.

The Central Corporative Committee subsequently fixed at four years the period within which the production of alcohol for use as motor fuel must reach the necessary quantity for mixing with all the petrol used in the proportion of 20 per cent. in volume of alcohol to 80 per cent. of petrol.

The corporative rule for the control of the cultivation of sugar beet adopted by the central Committee is also of considerable importance. This is a question which is of special interest to Northern and Central Italy. The farmers of those regions can advantageously cultivate this crop, which is certain to be remunerative since there exists in the country a sugar industry capable of absorbing the product. However, this industry has limits that cannot be exceeded and are determined by the capacity of the market to absorb the sugar produced; hence the necessity of regulating the production in order to prevent an injurious disequilibrium. But this control must not favour some persons to the disadvantage of others; the production must, therefore, be equitably distributed. The Central Corporative Committee has, accordingly, decided that the growers of beet for the production of sugar may only cultivate in the 1935 season a given area of land and that they may only consign to the sugar factory the beet produced on that area; it is further prohibited that a farmer who has signed an agreement to cultivate beet for the production of sugar should also cultivate sugar beet for use as feed for live stock.

On the basis of the resolutions of the Central Corporative Committee various measures have already been issued (1) for the corporative control of the national economy and others will follow in due course.

The examples above set out will give an idea of the collaboration of the corporative organisations in the solution of the problems of production and distribution and in the struggle against economic depression and against the consequences of the crisis.

G. COSTANZO.

Sources consulted:

ANSELMI Anselmo. L'organisation syndicale et corporative en Italie depuis les récentes réformes. *Revue Internationale du Travail*, Vol. XXXI, No. 1, January 1935. International Labour Office, Geneva.

BIAGI Bruno. Scritti di politica corporativa. Bologna, Zanichelli, 1934.

(1) By a Ministerial Decree dated 27 February 1935 a corporative committee was formed for the control of silk production in its various branches; by Royal Decree-Law of 25 February 1935, No. 305, a premium of 1 lira per kilogramme is granted for fresh merchantable cocoons produced in the 1935 season, and by Decree of the Head of the Government of 3 May 1935, No. 525, rules are laid down for the control of the cultivation of beet.

Bottai, Giuseppe. Il Consiglio Nazionale delle Corporazioni. Verona, Mondadori, 1932.

Do. Esperienza corporativa (1929-1934). Florence, Vallecchi, 1934.

Rocco Alfredo, **Asquini** Alberto and **Azzariti** Gaetano. I rapporti fra capitale e lavoro. *Annali di Economia*, Vol. IX, No. 2. Padua, Cedam, 1934.

Serpieri Arrigo. Fra politica ed economia rurale. Florence, Barbèra, 1934.

Istituzione delle corporazioni. Ministry of Corporations. Rome, 1934.

Sindacato e Corporazione. Bulletin of corporative information issued by the Ministry of Corporations. Rome.

AGRICULTURAL CO-OPERATION IN YUGOSLAVIA

I. — History of the Co-operative Movement before the Unification of the Kingdom.

In Yugoslavia, which is composed of Serbia and various regions which before the Great War formed part of other States, uniformity of development in the co-operative movement has not been possible. The foundation, organisation and development of co-operative societies were determined by the special political, economic, social and national influences of the different States.

The Slav peasants (Serbs, Croats, Slovenes, etc.) who now inhabit the territory of Yugoslavia have for many centuries led a patriarchal and isolated existence. Cultivation of the land and nomadic stock-breeding were practised rather on behalf of their lords than to supply their own urgent needs.

Since the XVIIIth century, however, the Slav peasants have tried to group themselves into family communities, *zadrugas*, in order to facilitate the cultivation of the land and to protect their interests. At first these groups were in the nature of an association between members of one family, but later on the notion was extended to associations of neighbouring families.

The rapid and strongly marked development of the towns at the beginning of the XIXth century, the gradual decay of the power of the overlords, the need felt by the peasant farmers for an organisation for mutual financial assistance to facilitate payment of taxes and to afford protection against the moneylenders, and finally the awakening of social, national and religious sentiments in response to the propaganda efforts of the intellectual classes, all tended to bring about a modification of the primitive conception of grouping as held by the Slav farmers.

Beginning with the time when the principle that " the land belongs to him who cultivates it " became more deeply rooted, and after Serbia had in 1830 succeeded in obtaining for the peasants liberation from the servitudes, which were replaced by taxes in kind, the idea of a wide form of mutual collaboration among the Slav farmers became mainly inspired by economic motives.

Later the substitution of payments in kind by money payments, first introduced by the reform of Prince Milos in 1836, brought about a veritable

transformation of the agricultural economy of the Slav farmers, who now found themselves obliged to sell their crops in order to obtain the money required for the payment of taxes. During this same period the desire arose among the rural masses to buy the land which they were cultivating as tenants, but, from want of funds and of any organisation capable of supplying funds, the peasant farmers fell even more than before into the hands of the money lenders.

From this time, it may be said, the *zadrugas* became more fully alive to the necessity of transforming themselves into true co-operative societies of the type that appeared in 1830 to 1850 in England, France and Germany.

The object of the first Slav (Serbian and Croatian) co-operative societies was not merely to collect money from the farmers for distribution among such as had need of it, but also to engage in cultivation, stock-breeding and the supply of farming requisites for joint utilisation.

The more specialised co-operative societies for the different branches of agriculture did not appear until much later.

Before examining the structure and development of the co-operative movement in Yugoslavia, it will be of advantage to give a brief description of the development, up to the time of the Balkan wars, of the Slav co-operative movement in each region separately.

Serbia. — The forerunners of the co-operative movement in Serbia were, as has already been said, the family communities, *zadrugas*. The first co-operative societies began to appear spontaneously and sporadically in the neighbourhood of the town centres. In comparison with other parts of Yugoslavia, the initial development of Serbian co-operation began very late and it was not until 1894 that the first agricultural co-operative credit society of the Raiffeisen type was founded in the village of Vranova (near the town of Smeredova). The principal object of this society was the protection of the members against the moneylenders and middlemen. This first agricultural society, according to its rules, could lend money to members only, and for periods not exceeding two years. In addition to its purely financial objects, this society bought and distributed seeds, machinery and other farm requisites among its members either for cash or on credit. Thanks to State assistance and to that of the educated classes (teachers, clergy, etc.), the Serbian co-operative movement developed fairly rapidly. From 1904 to 1908, the total number of members of co-operative societies rose from 17,858 to 26,616. In 1908 all these members of Serbian co-operative societies, for the most part farmers, were grouped in 654 societies. The value of the property of these societies during the same period amounted to 2,400,000 dinars, that is, 3,683 dinars per co-operative association and 90 dinars per member. A Central Bank, established in Belgrade in 1908 for the purpose of serving as a clearing bank for the co-operative societies, received any surpluses accumulated by the societies and granted loans to co-operative societies requiring assistance. Thanks to the generous government credit, the Central Bank, in 1909, granted loans up to the sum of about 1,000,000 French francs, while the total sums remitted by the local co-operative societies did not exceed 300,000 francs.

From 1900 the differentiation of the first Serbian co-operative societies, known as agricultural credit societies, began. The first co-operative distributive society was founded at the beginning of 1903 on the Rochdale principle and in 1909 the number of these societies had risen to 42. In spite of the great development of cattle breeding, the co-operative dairy societies evolved very slowly and after long delay. In 1909 there were only 12 co-operative dairy societies in Serbia. The co-operative wine-making societies, of which there were only 3 in 1909, made even slower progress.

The *co-operative societies for the joint utilisation of agricultural machinery*, however, had made marked progress and by 1909 there were 153 already in existence in Serbia.

As the result of the Balkan wars and of the great war, there is an absence of official, and even of less exact, information on the development of the Serbian co-operative movement during the period 1909 to 1919, which makes it impossible to trace its history although it is almost certain that these calamities had an adverse effect on the the development of Serbian co-operation.

Croatia-Slovenia. — As in Serbia, so in these regions, " family communities " existed from a very remote period. To these communities as well as to the foundation of the Croat-Slovene Agricultural Society at Agram (Zagreb) in 1849 and of the Agricultural Society for Slovenia founded at Osjek in 1875 may be traced the origin of the true agricultural co-operative societies; in fact, after the promulgation of the Austro-Hungarian law dissolving the " family agricultural communities, " the rural masses hastened to group themselves in agricultural co-operative societies. For this reason the first co-operative society was founded at Brdovac, near Agram, in 1873. The autonomous Government of Croatia-Slovenia had made efforts, since 1882, to encourage the establishment of co-operative credit societies of the Schulze-Delitsch type, but this type did not prove acceptable to the farmers. By virtue of a law of 1898, two Central Co-operative Credit Societies were founded at Agram and Osjek, which stimulated the establishment and development of new co-operative credit societies. In 1909, in fact, there already existed 271 of these societies in Croatia-Slovenia with about 55,000 members. In addition, the foundation of the Croatian Rural Bank, at Agram in 1901, in accordance with the resolutions of the first Croatian Catholic Farmers' Congress, gave an impetus to the foundation of agricultural co-operative societies. In 1909 the number of these societies was already 225 with about 34,500 members.

At the same time as the Croats, the Serbs had founded at Agram in 1898 a Union of Serbian Rural Banks which by 1909 had succeeded in establishing 297 rural banks grouping more than 10,000 farmers. The total number of all the co-operative societies in Croatia-Slovenia in 1909, including the Croat-Slovene agricultural societies and the Serbian co-operative societies, amounted to 877 with a membership of about 110,000 *i. e.*, 44 per thousand of the inhabitants were members of co-operative societies. The rivalry between the Croats and Serbs for the establishment of co-operative societies in Croatia-Slovenia under the Austro-Hungarian rule stimulated considerably the growth of the co-opera-

tive movement among the rural masses. The Croats, however, in founding co-operative societies, were engaged in a twofold struggle, one political and national against the Austro-Hungarian Empire, and the other religious against the Serbs. This conflict naturally retarded the differentiation of the co-operative societies according to the type of activity. In spite of the support of the autonomous government and of the public authorities, the co-operative dairying societies developed slowly and in 1909 only 29 were in existence. The progress of the co-operative wine-making societies was also slow and at the same period only 4 had been formed.

The Croatian co-operative societies, which had not suffered from the Balkan wars and were in a more favourable position during the great war, were able to develop with little interruption during the period 1909-1919; in fact, in 1919 the Federation of Agricultural Co-operative Societies was founded at Agram, in which were grouped 291 Croati-Slovene co-operative societies and 64 Croatian co-operative societies established in Bosnia and Herzegovina.

Bosnia and Herzegovina. — The forerunners of the agricultural co-operative societies in these regions were the *pripomočna zacladas* a kind of *monts-de-piété,* founded by the Austro-Hungarian Government in 1886. Actually their origin dates back to a far more remote period. Under the Turkish domination the Slav peasants were obliged to pay taxes to their overlords either in money or kind. In order to meet these obligations the Slav peasants collected a part of the harvest due to the public treasury in special barns; this was afterwards sold and any surplus remaining after the payment of taxes was used to form a public utility fund. In this way the *primočna zacladas* were able to grant loans to farmers at a very low rate of interest. These *primočna zacladas* have remained in existence until today, but the number now does not exceed 50. As they are State institutions they cannot be replaced by co-operative societies. For this reason the true co-operative societies appeared much later in Bosnia-Herzegovina, and their progress has been solely due to the influence of the Serb-Croatian co-operative movement. The Serbs established a peasant farmers' co-operative society at Orasje in 1904 and in 1905 the Croats founded a Croat peasant co-operative society at Nevesinje. In 1911 there were in existence in the two regions 68 Croatian co-operative societies while in 1914 there were 128 Serbian co-operative societies.

Dalmatia. — Under Italian influence co-operative societies appeared in Dalmatia at a very early date; in fact, in 1864 the *Cassa di mutuo credito* was already in existence. The strongest impetus was given to the co-operative movement by the Austrian law of 9 April, 1873, on the co-operative societies. In 1874 three co-operative societies were established: — (1) The co-operative dairy society of Makarska; (2) *La Società per la pesca delle spugne* and (3) The *Consorzio di risparmio* at Zara. In 1875 the *Consorzio Apistico di Solta* was founded and in 1879 a new co-operative credit society. These co-operative societies, however, yielded to the pressure of the Serbian co-operative movement and were liquidated or transformed and in 1896 the Serbs began to found

co-operative societies of the Raiffeisen type in Dalmatia. Already in 1900 there were 32 of this type in existence and in 1906, there were 108. In 1907 the Federation of Serbian Agricultural Co-operative Societies was founded at Split and was federated with the Federation of Belgrade in 1922.

II. — Co-operative Legislation.

As no special legislation existed, the first Slav co-operative societies, formed in the various regions of what is now Yugoslavia, came under the provisions of the Commercial Code relating to economic and commercial societies.

The first special legislation on co-operative societies is found in the regions which previously formed part of the Austro-Hungarian Empire.

In fact, the first Slav co-operative societies in *Croatia-Slovenia*, after having been regulated by the Austrian law of 26 April 1852 on economic-commercial associations, came under the Austrian law of 9 April, 1873, which referred exclusively to co-operative societies. This law established special provisions on the founding, organisation and activities of co-operative societies of all descriptions. The most striking feature of this law was the concession to co-operative societies of complete independence as regards local authorities, and the permission to found co-operative societies of two principal types, namely, limited liability and unlimited liability.

Among other Austrian legislative measures for the regulation of co-operative societies, mention must be made of the laws of 21 May 1873, 27 December 1880, and 1 June 1889 which besides containing provisions relating to the audit and to the control of their activities also granted the societies various privileges, and especially those of a fiscal nature.

It is also of interest to note that the law of 1 June 1889 principally favoured the development of co-operative credit societies in Slovenia. All these legislative measures while promoting the development of the Slav co-operative movement, at the same time encouraged the formation of centres of national culture among Slavs. This result had not formed part of the intentions of the Austro-Hungarian Government which hastened to limit the political activity of the Slav co-operative societies; in fact, the law of 10 June, 1903, on the co-operative societies imposed compulsory inspection of all co-operative societies at least once a year. According to this law, audit was to be carried out by the local authorities and should not be confined to book-keeping but should also be extended to the various activities in order to ascertain if these conformed to the provisions established by the rules.

In *Serbia* the first co-operative society was founded on 29 March 1894 and in 1898 there were already more than 100 in the country. In view of the rapid progress made by the co-operative movement, the Serbian Government on 3 December 1898, passed a special law on agricultural co-operative societies and co-operative societies of artisans. This law gave a precise definition of a co-operative society, its aims, and activities, and also laid down very severe rules for the control and supervision of its activities. At the same time this law granted privileges of a fiscal nature to the co-operative societies exempting

them from direct taxation "on labour, capital and income" and from other special taxes.

It must, however, be remembered that in the year before this law was passed, a loan fund for the benefit of the agricultural co-operative societies was established on 13 August 1897, by means of a law on the encouragement of agricultural co-operative societies. In addition, the law of 4 October 1899 exempted these societies from payment of postal charges and on 26 January 1900, a law was passed on the encouragement of agricultural co-operative societies by which new privileges were granted for the foundation of these societies. In 1904 a special law accorded the General Union of Serbian Agricultural Co-operative Societies, founded in 1895 at Smeredovo, the right to audit the activities of the local co-operative societies and of the Central Co-operative Bank.

The numerous and efficacious legislative measures for the benefit of the Serbian co-operative movement placed this movement in a much more favourable position in relation to the Slav co-operative societies of the other regions of what is now Yugoslavia. As no special legislation existed, the co-operative societies of *Dalmatia, Bosnia, Herzogovina and Vojvodina*, which had been founded and encouraged by the Serb and Croat intellectual classes, were regulated by the laws in force for the Croatian and Serbian co-operative movements.

After the establishment of the Yugoslav Kingdom, numerous proposals were put forward and examined with the object of unifying legilslation on the co-operative movement throughout the whole of Yugoslavia; but owing to technical, administrative and other difficulties, up to the present none of these proposals have become effective. The Yugoslav co-operative societies in the various parts of the country continue to be regulated by the different laws inherited from the old Serbia and the former Austro-Hungarian Empire.

Among the legislative measures on the co-operative movement in general passed after the Kingdom of Yugoslavia was established, mention may be made of the law of 12 June 1925, on agricultural co-operative credit, which however, applied solely to societies of this type. This law contained precise regulations for the establishment of new agricultural credit societies the object of which was to ensure to their members the necessary credit for developing and improving agricultural production (including stock-breeding, agriculture, fisheries, etc.). According to Article 16 of this law the local co-operative societies, constituted by the law, also the central agricultural associations (agricultural co-operative societies, agricultural syndicates, etc.) may form part of the Provincial Federation of Agricultural Credit.

The agricultural co-operative credit societies grant short or medium term loans to their members. The short term loans must be repaid after the harvest or after the termination of the work for which they were granted, and in all cases at the end of one year. The medium term loans are granted on security, whether pledge of State guaranteed bonds or of cattle or farm implements bought, or, even by mortgage of real estate guaranteed. They must be repaid in six-monthly instalments of equal amounts, including interest, and within a period not exceeding a maximum of eight years. Interest payable on loans

should not exceed the discount rate of the National Bank by more than 4 per cent. By this law a new spirit has been introduced into the Yugoslav co-operative movement, one free from all regional, political or social tendencies.

Owing to special State grants, 1,200 Yugoslav agricultural co-operative credit societies were established in 1927 out of a total of 3,700 co-operative credit societies. In the law of 21 September 1929 on promotion of the development of agriculture, article 19 was inserted relating to the co-operative societies. This Article states that the reporters (commissioners specially instituted by this law for superintending the encouragement of agriculture) should keep in close contact with the co-operative societies and should carry out propaganda among the rural masses for the foundation of new co-operative societies.

With the exception of this law which relates to Yugoslav co-operation in general, the other legislative measures, passed during the last few years, apply to the different branches of the co-operative movement. For example, there may be noted the law of 1922 on the establishment of agrarian communities on a co-operative basis whereby 137 agrarian communities were founded in 1923, and the law of 31 December 1931 on the co-operative health societies which contains special provisions for the foundation and scope of these societies, with a view to the centralisation of the co-operative health societies which were rapidly appearing in all parts of the country.

Among the special laws having an indirect bearing on the co-operative movement, mention may also be made of the law of 21 December 1929 for the promotion of stock breeding. Several articles contain special provisions for founding co-operative societies for selective breeding of cattle. As a result of this law six new Central Unions have been instituted in the country grouping co-operative societies of this type. In addition, two other recent laws may be recalled which have a indirect bearing on the various branches of the Yugoslav co-operative movement: the law of 1931 on fisheries and the law of 1933 on apiculture which have contributed towards the establishment of new co-operative societies of this type.

In concluding this brief survey of the legislation which has directly or indirectly influenced the progress of the Yugoslav co-operative movement after the Kingdom was established, the provisional enactment of 20 April 1932 for the protection of farmers must not be omitted. This law, by granting considerable facilities to debtor farmers, somewhat unfavourably affected the financial interests of the co-operative societies, particularly those dealing with agricultural credit. Some anxiety was felt at the development of the financial crisis in the co-operative societies and the Government hastened, on 23 November 1933, to issue a special Decree for the protection of co-operative credit societies and their Unions, the object being to endeavour to nullify the the effects of the preceding law.

Naturally these isolated legislative measures which only refer to particular categories of the co-operative societies, together with the legacy of old laws which have remained in force and with the dependence of the societies from the different Regional Unions, create confusion and hinder the normal development of the Yugoslav co-operative movement. The necessity for a special uni-

form law on all the co-operative societies throughout Yugoslavia becomes increasingly urgent as proved by the *desiderata* expressed in the last Congress of the General Union of Co-operative Societies of Yugoslavia which took place at Belgrade on 25 March 1934. Among the many recommendations made the most important were as follows: — (1) unification of co-operative legislation; (2) granting to the co-operative societies the greatest possible freedom of the Audit Unions; (3) exemption from all forms of taxation (taxes, rates, etc.,), which has much increased latterly.

(*To be continued*).

G. SEVERIN.

HAIL INSURANCE IN GERMANY

Hail insurance is operated in Germany by two classes of undertakings private companies and public institutions.

The following private companies were in 1932 under the inspection of the National Office for supervision of private insurance (*Reichsaufsichtsamt für Privatversicherung*):

(*a*) Joint-stock companies:

Berliner Hagel Asseckuranz Gesellschaft of 1832, Berlin, with a capital of 3,000,000 Rm.

Kölnische Hagel Versicherungsgesellschaft, Köln, with a capital of 1,800,000 Rm.

Magdeburger Hagelversicherungsgesellschaft, Magdeburg, with a capital of 2,200,000 Rm.

Union-Allgemeine Deutsche Hagelversicherungsgesellschaft, Weimar, with a capital of 3,600,000 Rm.

(*b*) Large mutual insurance societies (accepting premiums to an amount in excess of 1,000,000 Rm. in 1931:

" *Ceres* " *Hagelversicherungsgesellschaft auf Gegenseitigkeit*, Berlin, with a reserve fund (§ 37 of the Law on the supervision of private insurance companies of 6 June 1931) of 1,124,000 Rm.

Deutsche Hagelversicherungsgesellschaft a. G. für Gärtnereien, Berlin, with a reserve fund of 514,000 Rm.

Norddeutsche Hagelversicherungsgesellschaft a. G., Berlin, with a reserve fund of 2,470,000 Rm.

Landwirtschaftliche Versicherungsgesellschaft a. G., Greifswald, with reserve fund of 2,923,000 Rm.

Gesellschaft zu gegenseitigen Hagelschäden-Vergütung a. G., Leipzig, with a reserve fund of 912,000 Rm.

Mecklemburgische Hagel- und Feuer-Versicherungsgesellschaft a. G., Neubrandenburg, with a reserve fund of 2,073,000 Rm.

Schwedter Hagel und Feuer-Versicherungsgesellschaft a. G., Schwedt, with a reserve fund of 1,617,000 Rm.

(*c*) Small mutual insurance societies (accepting premiums to an amount not exceeding 1,000,000 Rm. in 1931:

Hagelversicherungsverein a. G. für das nordöstliche Holstein, Neustadt (Holstein).

Hagelversicherungsgesellschaft a. G. für das Land Ratzeburg, Schönberg (Mecklenburg).

Nusser Hagelversicherungsgesellschaft a. G., Nusse b. Lübeck.

Oldenburgische Hagelversicherungsgesellschaft a. G., Oldenburg.

Schleswig-Holstein-Lauenburg. Hagelversicherungsgesellschaft a. G., Kiel.

The sphere of activity of these societies extends beyond the territory of the State (*Land*) in which their main offices are situated (1).

(*d*) In addition to these societies a few should be noted which are not under inspection by the *Reichsaufsichtsamt für Privatversicherung,* their activity being limited to the province in which their main office is situated. Mention may be made of the *Grevesmühlener Hagelversicherungsverein a. G.,* Schwerin i. M. (for Mecklenburg only), and the *Constantin Hagelversicherungsgesellschaft a. G. für Ostfriesland,* Emden, for Prussia only) (2).

The following public institutions were operating hail insurance in 1932:

Bayerische Landes-Hagelversicherungsanstalt, Munich.

Braunschweigische öffentliche Mobiliarversicherungsanstalt, Brunswick.

Danziger Feuersozietät, Danzig.

Feuersozietät der Provinz Brandenburg, Berlin.

Feuer Sozietät Grenzmark, Schneidemühl.

Hamburger Feuerkasse, Hamburg.

Land-Feuersozietät der Provinz Sachsen, Magdeburg.

Landschaftliches Brandkasse, Hanover.

Niederschlesiche Provinzial-Feuersozietät, Breslau.

Oberschlesische Provinzial-Feuersozietät, Ratibor.

Provinzial Feuerversicherungsanstalt der Rheinprovinz, Düsseldorf.

Eight of these institutions belong to the German Union of Public Hail Insurance (*Offentlich- rechtlicher Hagelversicherungsverband in Deutschland*), namely: *Feuersozietät der Provinz Brandenburg, Feuersozietät Grenzmark, Niederschlesische Provinzial-Feuersozietät, Oberschlesische Provinzial-Feuersozietät, Landfeuersozietät der Provinz Sachsen, Landschaftliche Brandkasse Hannover, Provinzial-Feuerversicherungsanstalt der Rheinprovinz, Danziger Feuersozietät* (3).

In Germany there is besides a very interesting form of organisation of hail insurance based on an agreement for collaboration between the public authorities and the private insurance business. Reference to this form will be made later.

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(1) Statistik fur 1932 über die unter Reichsaufsicht stehenden Versicherungsunternehmungen und Bausparkassen. Herausg. vom Reichsaufsichtsamt fur Privatversicherung, Berlin und Leipzig 1932, p. 139 and 1933, p. 33. Neumanns Jahrbuch der Privatversicherung im Deutschen Reich 1934, p. 561.

(2) Neumann, op. cit. p. XXVI.

(3) Neumann, op. cit. pp. XXVI and 581.

A brief account will now be given of the history alike of private and public hail insurance in Germany, in view of the interest attaching to the different forms of organisation of this branch of insurance in a country where it has been carried to so high a point of development.

I. — PRIVATE INSURANCE.

The first hail insurance society in Germany was the *Braunschweigische-Hagel-Assekuranz a. G.*, founded in 1791 as a mutual insurance society and with a local field of activity. This society was dissolved after a short time and the business done never reached any large figure.

In 1797 another mutual insurance society was founded at Neubrandenburg under the name of the *Hagelschaden-Assekuranz in den Mecklemburgischen Landen*, This society also engaged later in fire insurance business; it still exists to-day under the name of *Mecklemburgische Hagel- und Feuerversicherungsgesellschaft a. G.*

In 1811 there was formed at Kiel the *Hagel-Assekuranz Gesellschaft für die adeligen Güter und Klöster der Herzogtümer Schleswig-Holstein und Lauenburg* which was transformed later into the *Schleswig-Holstein-Lauenburgischer Hagelversicherungsverein a. G.* In 1912 the *Gegenseitiges Hagelassekuranz Gesellschaft für Anhalt* was founded at Köthen. This in 1823 ceased working, resumed activity in 1831 and finally disappeared in 1853. In 1820 *the Halberstädter Hagelschäden-Assekuranz-Gesellschaft* was founded, the operations of which came to an end after three years, the business done having amounted to about 1,000,000 Rm. In 1822 the first joint stock hail insurance company was formed under the trading name of *Berliner-Hagel-Assekuranz-Gesellschaft* with a capital of 1,000,000 thalers.

This company, which was the first to introduce fixed premiums paid in advance with full compensation for losses incurred, soon extended the sphere of its transactions throughout the whole of the States of North Germany. The premiums, fixed at ½ per cent. of the sum insured, proved inadequate and the company was authorised, in 1825, to raise the premium rate to ¾ per cent. but, in 1830, following the refusal of the Government to authorise another rise in premiums, it was obliged to go into liquidation. In 1832 this company was revived with a share capital of 300,000 thalers which was soon increased to 500,000 thalers.

In 1824 the *Gesellschaft zu gegenseitiger Hägelschädenvergütung* was founded at Leipzig, and in 1826, the *Hagel- und Feuerversicherungsgesellschaft a. G.* at Schwedt as a branch of the Neubrandenburg Society. Both these societies are still in existence.

In 1830 the *Würtemburgische Hagelversicherungsanstalt a. G.* was founded at Stuttgart. This society confined its activities within the limits of Wurtemburg. The system followed was that of fixed premiums, but with a reduction in compensation in case of insufficiency of funds. On account of the very great risks incurred by the societies operating in this region owing to the heavy falls of hail, together with the inadequacy of the established premiums, this enterprise could only pay compensation in full for one year (1833). In 1842 it received a contribution from the State of 15,000 florins which did not greatly improve the situa-

tion. As in 1853 only 6 per cent. of the claims were paid the company was liquidated towards the end of that year.

The *Badische Landes-Hagelversicherungsanstalt*, founded in 1834 at Freiburg on the model of the preceding society, was dissolved in 1846.

In 1832 two mutual insurance societies were founded in the Duchy of Brunswick and the Kingdom of Hanover which later amalgamated under the name of *Hannover-Braunschweigische Hagelschäden Versicherungsgesellschaft* and remained in existence until 1899.

The *Hagelversicherungs-Verein*, established in Bavaria, was never of great importance and in 1884 was united with the *Bayrische Landes Hagelversicherungsanstalt*.

The *Hagel Asseckuranz-Societät*, founded at Lippe-Detmold in 1838, went into liquidation after 30 years.

In 1841, the *Schwedter*, as had occurred with the mother society at Neubrandenburg, established the *Greifswalder Hage- und Feuer-Versicherungsgesellschaft* which is still in in existence. At this time the *Deutsche Hagelversicherungs Gesellschaft für Gärtnereien* was founded at Berlin, also several other local companies.

In 1850, the new joint stock company, *Thüringische Hagelschäden Versicherungsgesellschaft*, was founded which, in 1853, amalgamated with the *Union* and, as such, is still existing.

In 1851, the mutual insurance society *Ceres* was founded at Magdeburg and after being transformed into a joint stock company was dissolved in 1857 by the Government, owing to the fact that it had been obliged to utilise nearly half its capital to meet compensation claims, the premiums having proved insufficient. After 1850 a considerable development may be remarked in this branch of insurance, in fact, between 1853 and 1856 four joint stock companies were established, of which the three first are still in existence, the Weimar "Union," the *Kölnische*, the *Magdeburger* and the *Vaterländische* of Eberfeld. Owing to the more extended area of the activities of these companies, they were led to consider the preparation of general statistics on hail falls and the losses incurred so as to fix the risk incurred in each district and in consequence the respective rates. The development of joint stock companies may be shown by the business done. In 1854 these companies had insured risks up to 204,000,000 marks; after 10 years this sum had increased to 428,000,000 marks. A similar development does not appear in the transactions of the mutual insurance societies; in fact, while in 1854 they had insured the sum of 208,000,000 marks, at the end of 10 years the capital risks insured amounted to 243,000,000 marks only. The success of the joint stock companies resulted in 1865 in the establishment of a new company of this type: the *Preussische Hagelversicherungs-Aktien-Gesellschaft*, which, after 19 years, was doing business to the amount of 213,000,000 marks.

Sufficient care had not, however, been exercised in the choice of risks and the company had to abandon operations in the course of 1884. Two years later it reappeared again as a mutual insurance society with a far more limited scope. The development of the joint stock companies resulted in an active competition on the part of the mutual insurance societies, which in their turn began to make

progress, in consequence of the general development of agricultural insurance and also owing to the very high premiums which the joint stock companies had begun to apply in consequence of the heavy falls of hail at the end of 1860.

In 1869, the *Norddeutsche Hagelversicherungsgesellschaft* was founded at Berlin. Although a mutual insurance society its activities extended, like those of the joint stock companies, throughout the whole of Germany. This institution which began operations with a total of insured risks amounting to 13,000,000 marks, developed at a pace which outstripped any other society. After two years the sums insured amounted to 79,835,000 marks, in 1880 to 302,127,000 marks, in 1890 to 568,752,000, in 1900 to 748,148,000 and in 1911 to 967,088,000 marks. In 1932, in spite of the crisis, these transactions were represented by a total of 854,475,000 Rm.

The success of the *Norddeutsche* encouraged the establishment of other mutual insurance societies. In 1873 the *Borussia* was founded in Berlin, and in 1874 the *Allgemeine Deutsche Hagelversicherungsgesellschaft*, also in Berlin. The latter was dissolved in 1902. The *Patria*, founded in 1884 in Magdeburg, suffered a like fate and was obliged to go into liquidation in 1904. After the founding of the *Ceres* in 1885, the *Germania* in 1888 and the *Ostdeutscher Hagelversicherungsverband* at Breslau, no other private hail insurance business of any importance was established (1).

In 1931, the *Preussische* and the *Borussia-Ostdeutscher Hagelverband* were absorbed into the *Norddeutsche* (2).

A law on the insurance contract, or policy, was enacted in Germany on 30 May 1908, and came into force on 1 January 1910. This law contains some important provisions limiting the contractual freedom of the parties and is divided into five sections. The first contains provisions applicable to all branches of insurance: general provisions, compulsory declarations, additional risk, premiums, rules affecting insurance brokers. The second section contains the provisions of the law relating to insurance against damage and loss; general provisions, *i. e.*, terms of the policy, alienation of the insured object, third party insurance, fire insurance, hail insurance, live stock insurance, insurance against transport risks and insurance covering liabilities. The third section is devoted to the clauses of the law relating to life insurance. The fourth section contains the clauses on accident insurance, and the fifth the final clauses.

The following are some clauses relating particularly to hail insurance. In respect of hail insurance, the period, prescribed in Art. 5, paragraph 1, during which the insuring party may raise objection to any inaccuracy in the policy, may be reduced to a week (§ 109). The obligation to declare the actual occurrence of the event covered by the insurance is considered as fulfilled when a declaration has been made within four days of the occurrence. The obligation is in fact deemed to have been adequately fulfilled if the declaration is posted within the period indicated. The insurer may not take advantage of the

(1) FRATZSCHER: Landwirtschaftliche Versicherung. Berlin 1914 p. 6.

(2) *Die Versicherung* of 21 April 1932 and Statistik fur 1931 des Reichsaufsichtsamt, p. 141.

clause of an agreement whereby the length of the period, or the way of reckoning it, might be altered to the detriment of the policy holder (§ 110). The policy holder may not, before assessment of the damage and without the authority of the insurer, take steps to change the condition of products damaged by hail, apart from steps that cannot, in the interests of good management, be postponed (§ 111). When, after the occurrence of an event covered by the insurance, a further event takes place within the same insurance period, the insurer is not expected to repair the loss caused by the fresh event beyond the limit of the amount of the insured sum (§ 112). After the occurrence of an event covered by insurance, each party has the right to give notice of termination of the insurance, with effect for the insurer only at the end of the period of the current insurance and for the insured party at latest at that point of time. If the insured party gives such notice for an earlier date, the premium remains none the less as purchased from the insurer for the period of the current insurance (§ 113).

In the case of sale or forced expropriation of insured products of the land, the insurer cannot give notice of termination of the insurance with regard to the purchaser except for the end of the period of insurance in the course of which he becomes cognisant of the sale or other cession. When the transfer of property is not notified at a time convenient to the insurer, the latter is freed from all engagement if the event covered by the insurance occurs after the expiry of the insurance period in the course of which the notification should have been made to him. The insurer however remains bound if he has received notification of the change of ownership soon enough to be able to give notice of the termination of the insurance contract for the end of the insurance period. The insurer may not take advantage of the clause of a convention which deviates from these provisions to the detriment of the purchaser (§ 114). If any one acquires from the fact of a usufruct, a lease or similar agreement, the right to appropriate the insured products of the soil, the provisions relating to sale or forced expropriation are applicable (§ 115).

The provisions of this law do not apply to the laws of the different Federated States (*Länder*) relating to the insurances which are taken out officially, and in virtue of the law, with a public institution set up by the special legislation of the State, nor to insurances effected with an institution of this type in virtue of a legal restraint. Where, in fact, the case is one of insurance contracts effected by public institutions in open competition with other insurance undertakings (for example, hail insurance), it becomes a case of private contracts, and the law referred to applies in full with the single exception that the restrictions on the freedom of agreements and the provisions relating to insurance agents contained in this law are not applicable to the cases in question (1).

On 6 June 1931 the new text was published of the law of 12 May 1901 on the supervision of private insurance business, as modified by various subsequent laws and decrees.

(1) MANES. Versicherungslexicon, op. cit., p. 1113

This law is divided into ten sections. The first contains preliminary matter. The second deals with permits for operating insurances. The mutual insurance associations form the subject of the third. The fourth deals with the business of the insurance societies, *viz.*, general provisions, preparation of the balance sheet, special provisions relating to the reserves of life insurance companies, and finally provisions relating to priority of claim in the event of insolvency with reference to insurances against loss or damage. The fifth section deals with supervision and the duties and powers of the authorities responsible for supervision, organisation and procedure of the authorities so responsible. Foreign insurance undertakings form the subject of the sixth section. The seventh deals with co-operative savings banks intended to provide or to improve workers' dwellings or small houses (*Siedelungen*) or to liberate members from obligations incurred in this connection. The three last sections contain respectively transitory provisions, penalities and final provisions.

This law does not apply, *inter alia*, to institutions effecting reinsurance only except in the case of mutual insurance societies. The Minister of National Economy is however authorised with the consent of the Reichsrat to order that any such institutions should be brought under this law or under certain provisions contained in this law (§ 148).

Public or official institutions established on the basis of the laws of particular States are not subject to the provisions of this law, but must present to the *Reichsaufsichtsamt* certain statements on the course of their business. These institutions are however subject to the inspection of other Government authorities, in accordance with the provisions contained in the laws under which they have been established and in their own rules.

By the law of 25 June 1910 fire insurance undertakings in Prussia are placed under the supervision of the *Oberpräsident* and that of the Minister of Internal Affairs. According to the statutes of the Union of Public Hail Insurance supervision of the Union is exercised by the Minister of Internal Affairs (1).

The *Reichsaufsichtsamt* and the States' authorities practising supervision are obliged to keep each other informed of the juridical and administrative principles adopted in each case. The same is true in regard to the principles established by the authorities of the Federated States in connection with the supervision of public insurance undertakings (§ 152).

The supervision of any private insurance business the activity of which is limited to a particular State is exercised by the authorities of that State (§ 3). The private insurance societies the activity of which is limited to a particular State are under the supervision of the National Office if the State itself so desires and if the President of the Reich so rules with the consent of the *Reichsrat* (§ 4). Private insurance societies, which operate also outside the territory of the State but the activity of which is limited in respect of the object insured, of the

(1) MANES. op. cit. p. 1113.

territory or of the persons included under the societies, are under the supervision of the authorities of the State in which are their headquarters, if the Minister of National Economy, in agreement with the government of the State in question, so rules (§ 4).

Private Hail Insurance in Germany in 1911

Name of the Company or Society	Sums assured	Premiums	Claims	Expenses of administration
	M	M	M	M
Joint Stock Companies				
Berliner H A G, Berlin	117,590,000	1,481,820	504,245	268,730
Kolnische H V G, Koln a Rh	236,531,000	2,414,688	751,147	424,346
Magdeburger H V G, Magdeburg	263,891,000	3,103,486	897,757	704,522
"Union", Weimar	188,316,000	2,276,185	577,977	403,298
Vaterland H. V G Elberfeld	117,596,000	1,533,965	586,801	351,308
Mutual Insurance Societies				
"Borussia", H V G, Berlin	112,405,000	1,069,033	748,995	314,516
"Ceres", H V G, Berlin	106,192,000	906,998	666,785	344,100
Norddeutsche H V G, Berlin	967,088,000	8,537,522	6,770,835	1,578,519
Preussische H V G, Berlin	65,0[illegible],000	606,512	402,719	184,710
H V G f Gartnereien Berlin	24,848,000	429,239	167,493	102,210
Leipziger H V G, Leipzig	105,490,000	980,266	606,009	319,409
Schwedter H V G Schwedt	202,578,000	2,151,[illegible]73	1,085,500	250,731
Greifswalder H V G, Greifsw.	105,275,000	955,485	843,552	22,649
Mecklenburgische H V G, Neubrandenburg	108,147,000	711,180	550,211	57,515
Ostdeutscher H V V, Breslau	101,181,000	1,375,857	1,242,166	70,654

The latest law amending the law of 1901, and enacted before the publication of the new text of the law on the supervision of the private insurance societies, was that of 30 March 1931. One of the principal reforms of this law consisted in the organisation of an audit, carried out by an auditor, of the settlement of accounts, of the book-keeping and of the annual report These can be approved by the Council of the society only after such audit has been carried out Detailed instructions are given as to the selection, the qualifications and the work of the auditors, of a similar character to the provisions of the new law on joint-stock companies, and all directed towards ensuring that the audit is seriously carried out and will not degenerate into pure formality In addition it is made obligatory to appoint a trustee who will take charge of the reserve fund of the premiums. The trustee is appointed by the supervisory council, or if no such council exists, then by the Administrative Council of the society The external supervising authority may place a veto on the choice and may appoint the trustee, if not satisfied with the candidate proposed The fund must be invested and safeguarded so as to prevent the use of it by the society without the consent of the trustee. He is empowered to check the books and written entries and

certifies on the balance sheet that the reserves therein shown are duly invested and safeguarded (1).

Private Hail Insurance in 1932.

Name of the Company or Society	Policies	Insured sums	Premiums	Claims paid
		(thousands of Rm.)		
Joint Stock Companies:				
Berliner Hagel Assek. G. v. 1832, Berlin	24,506	149,980	1,818	743
Kölnische Hagel V G., Köln a/Rh.	17,406	167,124	1,869	615
Magdeburger Hagel V. G., Magdeburg	31,914	160,527	1,870	788
Union Allg Deutsche Hagel V G., Weimar	12,280	173,375	1,871	853
Mutual Insurance Societies:				
"Ceres" Hagel V. G., Berlin	28,307	89,731	1,811	825
Deutsche Hagel V. G. f. Gärtnereien, Berlin	15,719	68,713	1,250	774
Norddeutsche Hagel V G., Berlin.	219,032	854,475	14,056	8,460
Landwirtschaftliche V. G., Greifswald	9,007	143,572	971	674
Gesellsch. z. gegens Hagelschädenvergütung, Leipzig	23,506	114,394	1,855	1,806
Mecklenb. Hagel-u. F. V G Neubrandenburg	3,861	125,879	1,147	918
Schwedter Hagel- u. F. V. G., Schwedt	12,961	248,432	3,981	3,175

The two tables here shown contain the main statistical data relating to hail insurance operations effected by the German private insurance undertakings coming under the National Office of Supervision of Private Insurance (*Reichsaufsichtsamt*), during 1911 (2) and 1932 (3). Sums received by the five small mutual insurance societies amount to 178,180 Rm. (4). Although it would have been possible to publish more recent statistics on the hail insurance institutions of Germany, the year 1932 has been chosen because for that year detailed statistics relating to the public or official hail insurance institutions are also available.

Accordingly there will be available for 1932 the elements required for obtaining a complete general view and for establishing comparisons between the different forms under which hail insurance is operated in Germany.

(*To be continued*).

F. ARCOLEO.

(1) Annuaire de legislation étrangère publiée par la société de législation comparée. Paris 1932, p. 90.

(2) A. FRATZSCHER, op. cit. p. 14.

(3) Statistik fur 1932 des Reichsaufsichtsamt fur Privatversicherung 1933, p. 139.

(4) Statistik fur 1933 des Reichsaufsichtsamt, p. 33.

BIBLIOGRAPHY ON ECONOMIC AND SOCIAL QUESTIONS

MOESSNER K. E. Dr.: Das Deutsche Bodenkreditsystem. Carl HEYMANS Verlag, Berlin, 1934, pp. XV + 420, 14 RM.

[This work, which appeared towards the end of 1934, is the first volume of a scientific series on German land mortgage credit. It is the intention of Prof. W. Kalveram, Frankfurt a. M., who has undertaken the preparation of the series and who is the writer of the preface to Dr. Mossner's book, to bring to the practical functioning of land mortgage credit all the assistance which may result from a close connection with the scientific theory. The difficulty of this undertaking is clearly seen from the fact that two similar attempts, made by F. Hecht in 1929 with the inauguration of the " Jahrbücher des europäischen Bodenkredits " and by F. Schulte in 1928 with the publication of the " Jahrbuch für Bodenkredit, " were very speedily abandoned.

In defining the scope of the new series of publications regarding land mortgage credit, Prof. Kalveram points out that the corporative structure of the German organisation of land mortgage credit within the frame of the national economy is a subject for scientific study of especial interest at the present time; side by side with this question, there are other questions of no less importance and in the foreground of interest such as debt conversion or debt clearance in respect of agricultural property, the effect to be given to the schemes of land settlement, the problem of the second mortgage, encouragement of the homestead and workers' dwellings system, the sanitation of the old quarters of towns, etc. The several studies, taking as basis the existing literature on the subject, should render accessible all the material dispersed throughout Germany and other countries.

The treatment in Dr. Moessner's book covers the basic conceptions, the theoretical system, the practical problems and the organisation of land mortgage credit in Germany as a form of banking. Part I, dealing with the conception on which German land credit is based, and Part II, in which the author deals with the theoretical system of the banking organisation of land mortgage credit, are in each case of comparatively limited extent. Since the theoretical foundations of the land mortgage credit system are still far from complete, the particulars given in these two parts are the more acceptable: they are at once important and indispensable for the discussion in Part III of the practical problems of land mortgage credit as a form of banking, and the presentation in Part IV of the structural organisation of German land mortgage credit.

In Part I the author, after describing the many contradictory basic views on credit economy, endeavours to outline the function of credit in modern trading economy and to disengage the idea of land mortgage credit from the general notion of credit.

In Part II the theoretical system of land mortgage credit as a form of banking is examined in the first place from the point of view of the granting of mortgage loans and afterwards from that of financing; the author discusses, lastly, the establishment of a balance between the granting of loans and the issue of bonds.

In Part III the author handles the practical problems of land mortgage credit as a form of banking in the first place in relation to agriculture, then with reference to housing and finally with respect to the mortgage bond market.

Part IV, the subject of which is the structural organisation of German land mortgage credit, contains comprehensive details on the *Landschaften*, *Stadtschaften* and mortgage banks, and finally in an appendix, a short note on other institutions issuing bonds.

Space does not permit of a more precise account of the last two parts of this volume, which are full of historical and statistical detail. In technical circles the description to be found there of an economic evolution in the course of which there have been many critical moments, will attract general interest, as will also the book as a whole.

It may be noted that the chapter on German agriculture in Part III contains in the first place a short historical retrospect on land mortgage indebtedness in prewar years. Then a description is given of the effects of war and inflation abruptly breaking the normal course of economic development, followed by an account of the credit position of agriculture after the stabilisation of the currency, the extent of the indebtedness according to size categories of farms and according to regions, as well as of the application of the credits arranged. Particulars are added of the economic bases of agricultural earning capacity since the stabilisation, of State measures of relief, of land settlement as a means of working bankrupt farms and, lastly, of the evolution that has taken place in the agricultural property market. In the summary of this chapter the author indicates the independent liability of a banking organisation, such as is represented by the *Landschaften*, *Stadtschaften* and the mortgage banks, as the best means for guaranteeing a guidance of credits in the direction of an appropriate balance between the interests of the mortgage bond capital and landed property. A misuse of liberty could be prevented by strong legislative measures, such as have long existed in Germany in the sphere of land mortgage credit. In the view of the author land mortgage credit might make a closer approach to personal credit, whatever importance may be attached to the definitely real security afforded. In this event the personality of the farmer would become a still more important factor than ever before in the granting of land mortgage credit].

E. P.

HERBERT DAY LAMSON: Social Pathology in China. The Commercial Press, Limited, Shanghai, China, 1935, p. 607.

[The author, a Professor of Sociology in the University of Shanghai and an internationally known authority on Chinese affairs and problems, presents a thorough picture of social conditions in China. Poverty and pauperism, the standard of living, wages and income, rural problems, urban industrial problems, housing, illiteracy and ignorance, population are dealt with in the first part of the volume. Part II discusses the problems of health devoting particular attention to forms of illness prevalent in the country: such as leprosy, tubercolosis, venereal diseases and mental deficiencies. Attemps at remedying existing conditions on the part of the Chinese themselves and of religious and missionary agencies are also dealt with in this part. Part III is entirely devoted to the family and its problems: marriage, divorce, desertion, the size of the family itself, infanticide, abortion, child and woman slavery, widowhood.

The author discusses his matter with the utmost frankness, generally backing both statements and suggestions for remedies to the existing evils with statements by leading Chinese authorities. Each chapter is followed by a number of questions for class discussion, as the whole work is intended to serve as a text book for the students of sociology of Chinese Universities. A general conclusion and an index complete this work which will be found extremely interesting by the sociologist and the layman who wishes to become acquainted with China as it is to day and of its efforts to prepare for itself a better and healthier to-morrow].

V. F.

G. LUGLI - G. FILIBECK: Il porto di Roma Imperiale e l'Agro portuense. Bergamo, Officine dell'Istituto Italiano d'Arti Grafiche, 1935-XIII, pp. 277, 132 illustrations, 16 tables, 4 maps.

[This publication presents a comprehensive account, with numerous illustrations, plans, etc., of the work of land reclamation of the estate of Porto in the Roman Campagna, which is considered to be one of the most dangerous centres of malarial infec-

tion. The lagoon which was formerly Trajan's harbour was recognised as being the principal source of infection, and the reclamation of this area was felt to be an essential condition for the hygienic, economic and social redemption of the region.

After some account of the work of drainage of this lagoon, the writers proceed to the subject of the agricultural improvement scheme undertaken by a consortium for the land and agricultural improvement of the zone. The first step was the construction of a network of roads extending to 80 kilometres in all, and of a large number of farm workers' dwellings and farm buildings. Two large centres specially designed for milk production were planned, and attention was given to the pasturage which was equipped with suitable shelters for herdsmen and herds alike. The settlement of the estate was effected by means of the formation of agricultural centres varying from a minimum area of 20 to a maximum of 100 hectares. All live stock, which have increased in numbers and are carefully selected, are kept in stalls. A machine depot ensures the regular working of the modern machines with which the estate is equipped. The farm agreement in force is that of share tenancy, or *mezzadria*.]

PUBLICATIONS RECEIVED BY THE LIBRARY

Books.

General.

MANTOVA. CONSIGLIO PROVINCIALE DELL'ECONOMIA CORPORATIVA. La vita economica nella Provincia di Mantova negli anni 1931 e 1932. Relazione e statistiche. Mantova, Tip. industriale mantovana, 1934.

Sociology.

BORSODI, R. Flight from the city. The story of a new way to family security. New York, Harper, 1933. 194 p.

INDES NÉERLANDAISES. DEPARTEMENT VAN ECONOMISCHE ZAKEN. Geld- en producten-huishouding, volksvoeding en -gezondheid in Koetowinangoen. Buitenzorg, Archipel drukkerij, 1934. XI. 424 p.

LAMSON, H. D. Social pathology in China. A source book for the study of problems of livelihood, health, and the family. Shanghai, Commercial press, 1935. 607 p.

OECHSNER, H. Der Bauer im Staat. Nationalsozialistische Bauernstaatskunde. Im Auftrage des Reichsbundes Deutscher Diplomlandwirte e. V., Berlin, Schaper, 1934. 80 p.

Economics.

FIELD, F. V. Economic handbook of the Pacific Area. Garden City, N. Y., Doubleday, Doran e C° 1934. 649 p.

LAMB, E. The planned economy in Soviet Russia. Philadelphia. Dorrance, [1934]. 193 p.

MACHLUP, F. Führer durch die Krisenpolitik. Wien, J. Springer, 1934. XV. 232 p. (Beiträge zur Konjunkturforschung, hrsg. vom Österreichischen Institut für Konjunkturforschung. Nr. 6).

EINARSEN, E. [et] K. A. WIETH-KNUDSEN. Verdenskrisen og det daglige brød. Trondheim, F. Burn, 1934. 186 p. [The world crisis and our daily bread].

Legislation

ANNUAIRE DE LÉGISLATION FRANÇAISE publié par la Société de législation comparée conténant le texte des principales lois votées en France en 1933. 53ème année. Paris, Librairie générale de droit et de jurisprudence, 1934. 245 p.

Rural Economics

AGRICULTURAL ECONOMICS SOCIETY. Journal of proceedings of the Agricultural economics society. Report of conference held in London 11th & 12th December, 1934. Reading, [Bradley & Son] 1935. 191-241 p.

BOSCHINI, G. Monografia economico-agraria del comune di Russi. Ravenna, Società tip.-ed. mutilati, 1934. 123 p. (Cattedra ambulante di agricoltura per la provincia di Ravenna).

FERTÉ, J. La situation critique de l'agriculture. D'après la documentation de l'Office central de comptabilité agricole de Soissons, 1927-1932. [Paris « Maison rustique »], 1933. 44 p.

HOFFMANN, H. Landwirtschaft und industrie in Wurttemberg insbesondere im Industriegebiet der Schwabischen Alb. Berlin, Junker & Dunnhaupt, 1935. VIII, 168 p. (Zum wirtschaftlichen Schicksal Europas. 2. Teil. Arbeiten zur deutschen Problematik, hrsg. von Carl Brinkmann, 2. Hft.).

KAMPP, R. Verdens-landbrug international landokonomi og jourdbrugsgeografi. Kjobenhavn, A. Busck, 1934. 502 p.
[World Agriculture. International Rural Economics and Geography].

Labour

BORTOLOTTO, GUIDO. Diritto del lavoro. Il contratto di lavoro e di impiego privato. Milano, U. Hœpli, 1935. XI, 503 p. (Manuali Hœpli).

Co-operation

22ème CONGRÈS NATIONAL DE LA MUTUALITÉ ET DE LA COOPÉRATION AGRICOLES. Moulins-sur-Allier, 28 juin-1er juillet 1934. Compte rendu des travaux. Moulins, A. Pottier, [1935] 284 p. (Fédération nationale de la mutualité et de la coopération agricoles).

DER GENOSSENSCHAFTSGEDANKE IM NEUEN STAAT. Vorträge gehalten auf dem vom Institut für Genossenschaftsvesen an der Johann Wolfgang Goethe-Universität veranstalteten Genossenschaftskursus in Kaiserslautern. Berlin & Wien, Spaeth & Linde, 1934. VI, 105 p. (Veröffentlichungen des Instituts für Genossenschaftswesen an der Johann Wolfgang Goethe-Universität Frankfurt a. Main. Hft. 8).

PIERRE, PRINCE DE GRÈCE. Les coopératives agricoles danoises et le marché extérieur. Paris, « Recueil Sirey », 1935. 181 p.

Credit

HERISSON, M. Le crédit agricole mutuel au Maroc. Paris, Rousseau, 1934. 285 p.

Industry.

WEGENER, K. A. Nationale Fettwirtschaft. Zusammenstellung der wichtigsten Bestimmungen der Bewirtschaftung von Speck, Schmalz und Talg nebst kurzen Erläuterungen. Kempten im Allgäu, Deutsche Molkerei-Zeitung, [1935]. 2 v
v. 3. Speck, Schmalz und Talg. 42 p.
v. 4. Die Bewirtschaftung von Butter und Käse. Ausbau des Fettplanes. (Ergänzungen zu Teil 1. u. 3). 80 p.

Various.

R. ACCADEMIA D'ITALIA. Annuario VI. 1933-34. Roma, 1935. 383 p.

COMMONWEALTH NATIONAL LIBRARY. CANBERRA. Select list of representative works dealing with Australia. 1934. Compiled under the direction of KENNETH BINNS, Canberra, L. G. Johnston, 1935. 7 p.

Periodicals (1), (2), (3).

A. E. F. [Afrique équatoriale française] v. 10. 1934. trim. Paris. 45 fr. int.; 50 fr. étr. (Agence économique de l'A. E. F.). [Formerly: « Bulletin économique de l'A. E. F. »].

AGRICULTURA nouă. v. 1, 1934. mens. Cluj. Lei 250 et Lei 500 pour instituts p. a.

ALGERIA. Revue mensuelle illustrée. v. 1, 1933. mens. Alger. 55 fr. int. et France; 100 fr. étr. (Office algérien d'action économique et touristique « OFALAC »). [Succeeded since March 1933 « Bulletin touristique » and since August 1934 combined with « Bulletin économique » de l'OFALAC].

BOLLETTINO mensile di statistica a cura dell'Ufficio provinciale dell'economia corporativa. 1935. Catania. (Consiglio e Ufficio provinciale dell'economia corporativa).

BOLLETTINO mensile di statistica a cura dell'Ufficio provinciale dell'economia corporativa. v. 1, 1934. Roma. (Consiglio provinciale dell'economia corporativa).

BULLETIN de l'agence économique des colonies autonomes et des territoires africains sous mandat. v. 27, 1934. mens. Paris. 30 fr. int.; 55 fr. étr. [Formerly: « Bulletin de l'agence générale des colonies »].

CHINA cotton journal. v. 12, 1934. sem. Shanghai. $ chin. 0,52 p. f. (Hua shang sha ch'ang lien ho hui). [Chinese cotton millowners' association]. [Text in Chinese].

CHRONOLOGIE économique internationale. v. 1, 1934. mens. Paris. 25 fr. int.; 30 fr. étr. (Institut scientifique de recherches économiques et sociales).

COLONIES autonomes. nº 1, 1935. trim. Paris. 25 fr. int.; 30 fr étr. (Agence économique des colonies autonomes et des territoires africains sous mandat) [Formerly: « Bulletin de l'Agence »].

COOPERAZIONE intellettuale. nº 1-2, 1935. 3 fois p. a. Roma. L. 20 int.; L. 40 étr. (Commissione nazionale italiana per la cooperazione intellettuale).

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(1) Previous list March 1934. To be continued September 1935.

(2) List of abbreviations: bihebd (biweekly); bimens. (twice monthly); bimestr. (every two months); déc. (every ten days); étr. (foreign price); f. (copy); hebd. (weekly); int. (home price); irr. (irregular); mens. (montly); nº. (number); N. S. (new series); p. a. (per annum); q. (daily); sem. (half yearly); s. (series): trihebd. (every three weeks); v. (volume); trim. (quarterly).

(3) Between brackets [/] are given translations and explanatory notes not appearing in the title of the review.

COTE BODENHEIMER des bourses de valeurs et de marchandises. *Supplément hebdomadaire.* v. 1, 1935. Paris. (Maison Bodenheimer).

DELTION kapnou. Revue des tabacs helléniques. v. 3, 1934. mens. Cavalla. (Office pour la protection du tabac hellénique). [Text in French].

DIRECCIÓN general de ganaderia e industrias pecuarias. Sección de fomento pecuario, investigación y contrastación: Estadística y comercio pecuario. *Boletín de cotizaciones e informaciones.* v. 1, 1934. bimens. Madrid.

GEWERKSCHAFTER. 1934. mens. Wien. S. 6. (Gewerkschaftsbund der österreichischen Arbeiter und Angestellten).

INDIAN central cotton committee. *Statistical leaflet.* nº 1, 1934. irr. Bombay.

INDUSTRIA. Boletín de la Sociedad de fomento fabril. v. 52, 1935. mens. Santiago de Chile. [Formerly: « Boletín de la Soc. de fomento fabril »].

INFORMATIONS du B. I. E. T. nº 1, 1933. irr. Paris. (Bureau international de l'enseignement technique).

JOINT COMMITTEE of cotton trade organisations. Information service. *Quarterly review of production and trade.* 1934. Manchester.

JOURNAL of agriculture and horticulture. v. 37, 1934. mens. Quebec. (Department of agriculture of the Province of Quebec).

MANX journal of agriculture. v. 1, 1934. sem. Peel, Isle of Man. 2s. 6d. p. a. (The Board of agriculture. Experimental farm).

MENSARIO de estatistica da producção. v. 1, 1935, mens. Rio de Janeiro. (Directoria de estatistica da producção do Ministerio de agricultura).

NANKAI social and economic quarterly. v. 8, 1935. Tientsin, $ Mex. 5 (Chine et Japon); $ Am. 5 (Etats-Unis et Canada); Lst. 1 (Angleterre et autres pays). (Nankai institute of economics). [Formerly: « Monthly bulletin on economic China »].

NATIONAL bureau of economic research. *Bulletin.* 5 fois p. a. nº 53, 1934. New York. $ 1.00.

OSTRAUM-BERICHTE. v. 1, 1935. irr. Breslau. (Osteuropa-Institut).

OUTCHET v sotsialistitcheskom zemledelii. 1935. mens. Moskva. Rb. 3. (Vsesoiouznoe obchtchestvo sotsialistitcheskogo outcheta). [Farm accountancy. (The society for the Soviet farm accountancy)].

RASSEGNA di politica internazionale. v. 1, 1934. mens. Milano. L. 30 (Istituto per gli studi di politica internazionale).

RAYON. Rivista tecnico-economica dei tessili moderni. v. 3, 1935. mens. Roma. L. 60 int.; L. 120 étr. (Federazione nazionale fascista degli esercenti l'industria delle fibre tessili artificiali).

REVISTA de agricultura. v. 7, 1935. mens. San José, Costa Rica. 1 Ps. or int.; 2 Ps. or étr. [Formerly: « Escuela de agricultura »].

REVISTA del trabajo. v. 3, 1933. mens. Santiago de Chile. $ 30 p. a. (Inspección general del trabajo).

RISPARMIO e credito rurale. v. 1, 1935. mens. Roma. L. 15 int.; L. 30 étr. (Féderazione nazionale fascista delle casse rurali, agrarie ed enti ausiliari). [Formerly: « La finanza cooperativa »].

STATISTICAL bulletin. v. 1, 1932. mens. Reykjavik. (The national bank and the statistical bureau of Iceland).

STATISTICAL bulletin of the International rubber regulation committee. v. 1, 1935. mens. London. 10s. p. a.

TERRA e lavoro. Supplemento del « Lavoro agricolo fascista »). v. 1, 1935. bimestr. Roma. L. 20. (Comitato nazionale per lo studio del lavoro agricolo).

WINES & vines. v. 16, 1935. mens. San Francisco, Cal. $ 1,50 p. a. [Formerly: « California grape grower »].

WORLD survey. v. 1, 1935. mens. London. L. 2.0.0 p. a. (The World power conference).

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PIG BREEDING AS A FACTOR IN THE EARNING CAPACITY OF AGRICULTURE IN DIFFERENT COUNTRIES ON THE EVE OF THE CRISIS

Now that the results of farm accountancy are, as stated in the previous article (1), available over a sufficiently long period, an attempt will be made at establishing comparisons between the net returns in the different countries selected and in the regions of these countries. An endeavour will be made to note the extent to which pig breeding affects the earning capacity of the farms. It is recognised that the crops and the industries of a farm are part of its structure and that their close organic connection makes it impossible to separate, economically, the results accruing from the different branches. To quote M. Ferté, Director of the Soissons Accountancy Office (France), *it is in the synthesis of all these separate accounts that the single figure is found that has an absolute and indisputable value: the one which relates to the whole.*

Everything hangs together on a farm: the earning capacity of a branch of farming influences that of another branch. " The determination of production costs by means of analytic accountancy, or double entry book-keeping, " says Dragoni (2), " necessarily brings into evidence the expenses incurred in wheat growing, or pig breeding, the returns given by these branches of production, and the profit or loss to the grower from the branch of production in question. One of the returns, however, from wheat growing is to be found in the straw which provides the live stock with feed or litter, while among the essential expenses of wheat growing is to be reckoned stable manure, and use of draught animals. It is clear that the determination of each of the production costs presupposes the determination of other costs, and as we have here an insoluble problem, certain provisional costs must be adopted which will not admit of scrupulous accuracy. "

The net return will be the corner stone of the whole of this discussion. Since the net return is the function at once of the gross return and of the farm expenses, by following the variations of the net return through the years, through the regions of production and the farming systems, it will be possible to discover the causes of these changes: the increase or decrease in the different returns consti-

(1) Comparative Studies of the Result of Pig Breeding in Different Countries. *Monthly Bulletin of Agricultural Economics and Sociology.* May 1935.

(2) DRAGONI, *Economia agraria,* Ulrico Hoepli, Milan.

tuting the total gross return, one of which is the gross return of pig breeding; the increase or decrease in the components of the farm expenses and in the farm expenses themselves. In order to render the comparison possible among the countries, regions and farming systems, a common measure will be chosen. The net return obtained in Denmark in 1927-28, for the whole of the Danish farms, which are mainly engaged in pig breeding, will be reduced to 100 and will serve as the basis of comparison. The difference, positive or negative, will then appear between the net return of 1927-28 in Denmark and the net returns for the subsequent years in the same country; and further the difference between the net return in 1927-28 in Denmark and the net return in the other countries in 1927-28 and in subsequent years. When the net returns increase, it will be seen if it is the gross returns that have increased or the farm expenses which have diminished, or whether the farm expenses have diminished to a greater extent than the gross returns. When the net returns diminish, it will be seen whether it is the farm expenses which have increased or the gross returns which have diminished, or whether the gross returns have diminished to a greater extent than the farm expenses. The next step is from the gross return and the farm expenses to their components. The net return of the Danish farms in 1927-28 being equal to 100, the farms of Switzerland will, for example, have given in 1927-28 a net return higher than in Denmark by 103 gold francs per unit of area (1), a gross return higher by 236, and farm expenses higher by 133 gold francs per unit of area. The Austrian farms show for 1927-28 a net return higher than in Denmark by 27 gold francs per unit of area, a gross return lower by 1140 and farm expenses lower by 1167 gold francs per unit of area. For that year the gross return from pig breeding will have been in Switzerland 386 gold francs per unit of area lower, and in Austria 467 gold francs per unit of area lower than in Denmark. In 1928-29 the same return in Switzerland was 416 gold francs per unit of area and that in Austria 494 gold francs lower than in Denmark. A comparison will first of all be made between the results of the farms, taken as a whole, of the different countries under review, and it will be seen how far these results, and in particular those of pig breeding, have varied from 1927-28 to 1931-32; then, placing these results in relation to 100 gold francs of net return in Denmark in 1927-28, a comparison will be instituted between the results of the farms of different regions and of different farming systems. The situation of agriculture and of pig breeding in each of the countries under review will thus become clear; finally, the examination will be undertaken of this situation in the regions and in reference to the farming systems.

If it be objected that the choice of the year 1927-28 as base year is somewhat arbitrary, the reply is that it is not practicable, using the available accountancy results, to go back beyond 1927-28, and that from 1930 onwards in certain

(1) The unit of area conventionally adopted in our calculations corresponds to the area, which, in Denmark, gives a net return of 100 gold francs, *i. e.*, 1.64 ha. The adoption of this conventional unit in our enquiry follows necessarily from the fact that, as the point of departure in our comparisons, we have adopted 100 gold francs of net return in Denmark in 1927-28.

TABLE I. — *Margin (positive or negative) between the net return, the gross return and the cost of production in eleven countries of Europe, in 1927-28 in comparison with Denmark. The net return of the Danish farms is reduced to 100 gold francs.*

	Net Return	Gross Return: Pigs	Gross Return: Milk and milk products	Gross Return: Stock breeding slaughter beasts	Gross Return: Cereals root crops	Gross Return: Other branches	Gross Return: Total	Farming Expenses: Labour	Farming Expenses: Fertilisers	Farming Expenses: Seeds and forage	Farming Expenses: Taxes	Farming Expenses: Other expenses	Farming Expenses: Total	Interest on capital	Cost of production
		Gold francs per unit of area						Gold francs per unit of area							
Denmark . . .	100	577	691	263	114	116	1,761	616	68	668	64	225	1,661	268	1,929
Netherlands Overijssel . .	— 73	— 253	— 78	+ 41	— 9	— 91	— 390	— 104	+ 35	— 164	— 50	— 34	— 317	+ 21	— 296
Switzerland . .	+ 103	— 386	— 12	+ 174	+ 28	+ 432	+ 236	+ 344	— 30	— 477	— 16	+ 312	+ 133	+ 317	+ 450
Austria	+ 27	— 467	— 560	— 139	— 21	+ 47	— 1,140	— 302	— 58	— 646	— 45	— 116	— 1,167	— 124	— 1,291
Germany . . .	— 102	—	—	—	—	—	— 946	— 235	+ 6	— 585	— 20	— 8	— 844	—	—
Norway	+ 48	— 422	— 126	+ 67	+ 128	+ 151	— 202	+ 71	+ 3	— 391	— 54	+ 122	— 249	+ 185	— 64
Sweden	— 62	— 534	— 330	— 103	+ 116	— 34	— 885	— 209	— 18	— 526	— 54	— 16	— 823	— 79	— 902
Finland	— 21	— 533	— 432	— 190	— 7	— 58	— 1,220	— 364	— 35	— 613	— 54	— 133	— 1,199	— 41	— 1,310
Poland	+ 92	— 496	— 593	— 149	+ 70	— 34	— 1,202	— 411	— 48	— 648	— 55	— 132	— 1,294	— 90	— 1,384
Lithuania (1). .	— 72	— 539	— 648	— 239	— 22	— 51	— 1,499	— 480	— 55	— 664	— 57	— 171	— 1,427	— 164	— 1,591
Latvia	— 70	— 539	— 600	— 236	— 61	— 70	— 1,506	— 467	— 55	— 665	— 58	— 191	— 1,436	— 211	— 1,647
Estonia	— 68	— 541	— 618	— 224	— 65	— 37	— 1,485	— 461	— 61	— 661	— 59	— 175	— 1,417	— 203	— 1,620

(1) In 1928.

TABLE II — *Distribution of the Arable and Cultivated*

Countries	Cereals						Root crops			
	Wheat	Rye	Barley	Oats	Other cereals	Total	Potatoes	Sugar beet	Other root crops	Total
	%	%	%	%	%	%	%	%	%	%
Denmark	4.22	6.98	**12.69**	**15.61**	0.81	49.31	2.73	1.61	14.95	19.29
Netherlands	6.81	**21.30**	2.86	**16.07**	6.07	53.11	**18.68**	7.67	10.52	36.87
Switzerland	**10.18**	3.92	1.28	4.04	4.02	23.44	9.46	0.32	2.65	12.43
Austria	10.61	**19.90**	7.67	**16.15**	3.69	58.02	9.51	1.27	4.24	**15.02**
Germany	8.53	**22.82**	7.19	**16.85**	3.97	59.36	**13.60**	2.19	5.58	21.37
Norway	1.15	1.57	**8.88**	**14.22**	0.99	26.91	7.31	—	2.21	9.52
Sweden	6.11	**7.43**	3.29	**18.76**	6.18	41.77	3.76	1.10	2.88	7.74
Finland	0.85	**10.62**	5 —	**20.83**	0.50	37.78	3.27	0.13	1.57	4.97
Poland (3)	7.13	**31.48**	6.10	10.82	3 —	58.83	**13.33**	1.10	2.04	16.47
Lithuania	5.42	**19.04**	7.17	**11.76**	6.49	49.88	5.27		2.14	7.41
Estonia	2.03	**14.52**	11.66	**14.23**	7.08	50.12	6.97		1.34	8.31
Latvia	2.55	**15.89**	10.63	**18.44**	4.54	52.05	4.74		4.72	9.46

(1) The figures for each country are taken from the International Yearbook of Agricultural Statistics - only — (4) Apart from grazing lands, which are included in the other lands of a total area of 2,564,07 hectares

countries and from 1931 in other countries the character of economic phenomena became entirely different from that with which we were formerly acquainted The established order has been indeed radically changed since the word ' crisis ' became familiar To protect their agriculture, the countries of the whole world have equipped themselves with import duties, export premiums, quotas and are surrounded with customs barriers which become increasingly formidable All the efforts of the Governments have however been rendered ineffective by the change in the scale of economic phenomena Agricultural conditions have become much more complicated and the laws which govern economic relations have greatly changed, so that forecasts become more difficult than ever before

Farm accountancy is the instrument that enables us to measure the effects of economic revolutions on the farm, and- with the help of supplementary information —frequently to trace them to their causes Directed by accountancy, studies may be made which when brought into relation with each other will present as precise and clear an image as possible of the situation of agriculture in the different countries

Area in percentage of total area in 1927-28 (1).

Industrial crops	Sown grasslands	Fallow etc	Bare fallow	Total	Arable land in % of cultivated land: Cereals	Root crops	Sown grasses	Fallow etc	Total in % of cultivated land	Grassland and pasturage in % of cultiv. land	Gardens and vineyards	Cultivated land
%	%	%	%	%	%	%	%	%	%	%	%	%
0.11	28.10	1.75	1.44	100	**43.99**	17.21	**25.07**	2.94	89.21	10.79		100
3.62	6.34	—	0.16	100	19.53	13.55	2.29	1.39	36.76	**50.52**	12.72	100
0.01	**64.12**	—	—	100	5.40	2.86	14.77		23.03	**76.33**	0.64	100
0.40	**21.85**	—	4.62	100	**25.61**	6.63	9.64	2.26	44.14	**53.02**	2.84	100
0.43	13.19	—	5.65	100	**41.76**	15.03	9.28	4.28	70.35	27.28	2.37	100
—	**62.68**	—	0.89	100	19.46	6.88	**45.34**	0.64	72.32	(4) 20.65	1.03	100
0.01	**42.22**	—	8.26	100	**33.11**	6.13	**33.46**	6.55	79.25	(5) 19.68	1.07	100
0.25	**47.55**	—	9.45	100	**24.48**	3.19	**30.56**	6.24	64.27	**35.55**	0.18	100
0.98	8.53	)**15.19**	—	100	**43.65**	12.22	6.33	12	74.20	25.80		100
3.19	16.46	23.06		100	**31.54**	4.69	10.41	16.60	63.24	33.75	3,01	100
3.48	**17.83**	1.86	18.40	100	18.27	3.03	6.50	8.65	36.45	**63.55**	—	100
3.37	**16.43**	—	**18.69**	100	**25.95**	4.71	8.19	11 —	49.85	49.52	0.03	100

(2) Under fallow are included the crops for green manuring and the grazing on arable lands — (3) Peasant farms hectares — (5) Apart from grazing lands which are included in the forests of a total area of 24,583,721

A beginning may be made by seeing what was the situation in 1927-28 in the countries under review. In Denmark the figures are as follows, expressed in gold francs per unit of area:

(a) Net return 100

(b) Gross return		(c) Farming expenses:	
pigs	577	labour	616
milk and milk products . .	691	fertiliser	68
stock farming	263	seeds and forage	688
cereals and root crops . . .	114	taxes	64
other branches	116	other expenses	225
Total . . .	1,761	Total . . .	1,661

(d) Interest on capital 268

(e) Cost of production 1,929

TABLE III. — *Production per hectare* (*) *in 1927-28* (1).

Countries	Wheat	Rye	Barley	Oats	Cereals (2)	Potatoes	Sugar beet	Fodder beet	Hay from sown grasses	Hay from natural meadows	Milk (3)	Cattle (live weight) (3)	Pigs (live weight) (3)
	q.	q.	q.	q.	q	q.	q	q.	q.	q.	kg.	kg.	kg.
Denmark	23.1	14.4	**23.6**	**21.6**	20.7	78.7	258.4	**505.7**	57.0	37.5	1,557	107	131
Netherlands	27.1	17.4	27.4	**20.6**	23.1	**158.1**	261.0	—	—	—	—	128	145
Switzerland	**21.8**	20.3	18.8	20.4	20.3	145.2	303.0	—	—	—	1,728	146	52
Austria	15.9	**13.3**	16.1	**14.1**	15.3	**155.5**	**295.7**	**311.5**	54.9	37.1	295	35	31
Germany	18.8	**14.5**	17.9	**18.3**	18.7	133.4	250.0	344.6	54.7	43.5	436	33	38
Norway	16.6	16.5	**16.8**	**18.9**	17.2	121.2	—	—	45.7	23.1	1,380	90	51
Sweden	19.0	**13.9**	16.2	**15.7**	16.2	67.7	243.8	268.9	41.3	13.6	957	65	20
Finland	16.2	**14.3**	13.2	**14.1**	14.4	107.5	180.8	—	**31.0**	10.9	719	19	17
Poland	12.2	**10.2**	11.4	10.8	11.1	**159.7**	179.2	198.0	4) 42.6	4) 28.7	352	15	41
Lithuania	12.0	**10.7**	9.5	7.8	10.0	90.9	—	—	41.5	20.0	4) 160	4) 11	4) 18
Estonia	10.9	**11.5**	7.9	**6.7**	9.2	104.0	—	170.3	**26.9**	10.0	212	14	18
Latvia	12.2	**10.1**	7.0	**5.8**	8.8	83.9	—	—	**30.8**	16.2	397	12	15

(1) The figures are taken from the International Yearbook of Agricultural Statistics. — (2) Including other cereals. — (3) Calculated on the basis of the figures of *Farm Accountancy Statistics*. — (4) In 1929-30. — (*) For crops per ha. of *sown area*, for livestock production per ha. of area as taken by the Accountancy Offices.

For the other countries, there are shown on Table I (p. 243) the plus values and the minus values which are found on comparing the results with these base figures.

These figures, however, by themselves tell us nothing: to reveal their significance, use must be made of the supplementary information to be obtained from the *International Yearbook of Agricultural Statistics*. In Table II there will be found the percentages of the arable area and of the area of land under cultivation which supply information on the extent of the crops; in Table III the figures relating to production per hectare are given. The Yearbook does not contain full data of the production of hay from sown grasses and from natural meadows, nor of sugar beet production. In Table IV the prices in gold francs of the main agricultural products are shown according to data supplied by the Accountancy Offices. For the cereals use will be made of the method employed for calculating index-numbers. Table V which is also based on data supplied by the Accountancy Offices, shows approximately the quantities of cereals and of potatoes produced, sold and transformed on the farm, and the proportion of the transformed quantities of cereals and of potatoes in relation to the quantities produced. Table VI, relating to the employment of labour in man-days per ha., is also based on accountancy data.

TABLE IV. — *Price in gold francs in 1927-28 of the chief agricultural products* (1).

Countries	Cereals q.	Potatoes q	Sugar beet q.	Beef kg.	Pig meat kg.	Milk litre	Butter kg	Cheese kg.
Denmark	27,59	18,84	3,47	1) 0,69	2) 1,80	0,21	4,19	1,17
Netherlands	24,18	15,02	—	3) 2,06	1) 1,37	—	4,33	4) 2,21
Switzerland	38,34	14,34	—	1) 1,70	1) 2,22	0,24	4,81	2,50
Austria	26,97	17,12	—	1) 1,76	3) 2,16	0,27	3,90	—
Germany.	29,52	4,55	—	1) 1,46	1) 1,47	0,23	4,50	2,94
Norway	29,51	21,83	—	3) 2,16	3) 1,84	0,25	5,07	5) 3,94
Sweden	26,89	19,07	4,01	1) 0,86	1) 1,27	0,23	4,15	2,13
Finland	26,07	9,14	—	1) 1,14	3) 1,54	0,22	4,06	2,19
Poland	24,68	5,59	—	1) 1,73	1) 1,19	0,17	—	—
Lithuania	—	—	—	—	—	—	—	—
Latvia	25 —	—	—	1) 0,92	3) 1,57	—	3,19	—
Estonia	25,67	5,85	—	1) 0,74	2) 1,22	0,21	3,74	5) 3,39

(1) Live weight. — (2) Bacon. — (3) Meat. — (4) Gouda. — (5) Emmental type.

Comparison is facilitated by maintaining in all the tables the same grouping of the countries. Clearly marked tendencies will be noted, and an attempt will be made to define the character of the agriculture of the countries in question.

(1) Material supplied by the Farm Accountancy Offices.

In Table II and III, the important crops and the high yields obtained in quintals per hectare have been shown in thick type, country by country.

TABLE V. — *Quantities of cereals and potatoes produced, sold and transformed on the farm per hectare of area* (1), *in 1927-28.*

Countries	Cereals grown q	Cereals sold q	Cereals sold in % of cereals grown	Potatoes grown q	Potatoes sold q	Potatoes sold in % of potatoes grown
Denmark	9 10	1.5	17	1 92	0.8	42
Netherlands (Overijssel)	4 98	2.6	53	11.98	—	—
Switzerland	(2) 1.13	1 4	—	3.25	2.4	73
Austria	2 56	1 8	70	4.22	0 5	11
Germany	8 57	6 9	80	14 —	5 6	40
Norway	3 37	2 3	68	6,41	3 7	57
Sweden	5 82	4 2	73	2 01	0 7	34
Finland	3 55	1 8	50	3 53	1 1	31
Poland	4 67	3 4	73	10 22	3 5	34
Lithuania	3.15	—	—	3 03	—	—
Latvia	1 88	0 8	43	1 67	—	—
Estonia	1 55	0 8	52	2 40	1 2	49

(1) Area taken by the different Offices as basis of the calculations of accountancy results, some Offices including forests, waters, etc, while others exclude these The great differences in the figures per ha. from one country to another are thus explained — (2) The area has been estimated.

TABLE VI. — *Labour Days per hectare and labour costs per man-day in 1927-28* (1).

	(?) Labour days per ha	Labour Costs per man-day in gold fr
Denmark	35 52	8.39
Netherlands (Overijssel)	60 —	5 27
Switzerland	75 —	7.81
Austria	64.25	2 98
Norway	70 —	5.99
Finland	36.58	4 25
Poland	66.61	1 87
Lithuania (2)	31 24	2.65
Latvia	25.50	3.57
Estonia	26 60	3 55

(1) For Germany and Sweden information is not available. — (2) In 1928-29.

Denmark is the country where the percentage of arable lands in the highest and in consequence the one in which cultivation is most intensive. Cereals occupy 43.99 per cent. and sown grasses 25.07 per cent. of the cultivated land. Barley, oats, fodder beet, hay from sown grasses are of primary importance in the feeding of stock. In spite, however, of the fact that cereals occupy nearly half the cultivated lands, recourse has to be had to imports of grain and of flour; tubers and fodder root crops bring in profits much higher than the return from cereals. These crops, however, do not supply sufficient stock feed and Denmark imports large quantities of concentrated feeds. The Danish farmer endeavours to obtain large returns from dairying and to carry on a flourishing business in pig fattening.

The distribution of the gross return and of farming expenses in Overijssel, most nearly resembles that found in Denmark with this difference that in Overijssel more importance is attached to stock raising than to pig fattening. The nature of the country has given this direction to the Overijssel farming. The permanent meadows in the Netherlands occupy the half of the cultivated land, and arable lands a third. The chief crops are potatoes and oats. The rural life is determined by a close association between stock farming and cultivation. The small farmer ensures the fertility of his lands by keeping a large number of animals, thereby obtaining plenty of stable manure. The stock farming has given a much higher gross return than in Denmark, the prices of live stock and the production per hectare having been higher. In Overijssel, 47 per cent. of the cereals produced were transformed on the farm itself, while in Denmark 83 per cent. of the cereal crops were so transformed.

The gross return from pig breeding was in Overijssel lower by 253 gold francs than in Denmark. The production per hectare seems to have been higher in Overijssel, but the price level was lower. It is largely to this difference in the earning capacity of pig breeding that is due the margin of 390 gold francs between the gross return of the farms of Overijssel and the gross return of the Danish farms.

Labour, in Overijssel, is much cheaper than in Denmark, and although more labour is required by the farming the labour costs were lower than in Denmark. The same is true of fodder; in Denmark the fodder consumption is enormous and very large quantities are purchased while much is also produced in the country itself. Of the twelve countries under review, it is, however, Overijssel which after Denmark consumes the most fodder; the consumption figures in the other countries are considerably lower. The other expenses, apart from those for fertilisers, also fall below those in Denmark, but the lower labour costs and lower expenditure on fodder were not sufficient to compensate for the lower gross return from pig breeding, with the results that the net return was 73 gold francs less than that of the Danish farms.

In Switzerland the proportion of permanent meadow land is very high, owing to the great extent of mountain and pasture land. The subsidiary crops are wheat and forage mixtures. In 1927-28, the net return of the farms was 103 gold francs higher than that of the farms of Denmark. The gross return and the farm expenses were both higher than in Denmark, the gross return to

a larger extent than the farm expenses. The value of dairying products is nearly the same in the two coutries. Denmark produces produces twice as much pig flesh per hectare as Switzerland, while in Switzerland on the other hand cattle farming is more intensively carried on than in Denmark. Prices of beef are higher in Switzerland than in Denmark, and in this respect the advantage is with Switzerland.

Of the two countries Switzerland exports the larger quantities of potatoes grown, fewer being required for the comparatively unimportant pig breeding industry.

The factor however which weights the balance in favour of Swiss agriculture, is that in Switzerland fruit-growing, vine growing and other special branches are favoured by the climatic conditions, and here the gross return is 400 francs higher than in Denmark.

Passing on to farm expenses, it will be seen that labour costs and current expenses are much higher in Switzerland than in Denmark. Labour is nearly as dear in Switzerland as in Denmark, and the Swiss farmer employs twice as much labour per hectare as the Danish farmer. Costs of living are also higher is Switzerland, which explains the high current expenses. At the same time, to produce a gross return higher than that in Denmark, the farms of Switzerland made smaller purchases of fodder in comparison with the same purchases in Denmark. The total farm expenses did not rise in Switzerland to an excessively high level, and the gross return made it possible to retain a margin of 203 francs per unit of area over the farm expenses.

Austria stands high in respect of the cultivation of rye and oats. Production per hectare for Austria, mainly relates to the regions of Lower Austria, so much so that in order to make a true comparison of this production with that of the other countries, some correction should be made, taking into account the fact that over the country as a whole the area of natural grasslands and of pastures of the mountainous regions accounts for more than half the area of cultivated land. The production of milk and of pigs remained much behind that of Denmark; stock breeding was also less profitable. The more prosperous vine growing, fruit growing and forestry could not counterbalance this disadvantage, and the gross return for Austrian farms was 1140 francs lower than that of Danish agriculture. On the other hand, Austria farms produce at a much cheaper rate; labour costs are much lower in Austria than in Denmark; the expenditure on fodder by Austrian farmers was less by 646 francs; current expenses were lower, and the result was a net return which is 27 gold francs per unit of area higher than that of Denmark.

The farms of Germany showed a somewhat higher gross return than that of Austria, but the German farmer produces at a higher cost than the Austrian peasant farmer; his expenditure on fodder, labour, and farm upkeep is higher. Austria, by producing cheaply, succeeded in obtaining a higher net return than that of Denmark; Germany with too high an expenditure obtained a negative net return. Undoubtedly the gross return might have been higher, and this was the case in the subsequent years. On extending the survey to these later years, the enquiry will become more complete and more valuable, owing to the fact that the components of the gross return will be known.

Norwegian agriculture is very similar to that of Switzerland. The proportion, in relation to the arable area, of sown grasses, is equally high in Norway as in Switzerland. In Norway, however, barley and oats have a greater importance than in Switzerland in stock feeding. The moisture of the climate favours the cultivation of oats, the chief cereal. Barley is found in the large inland valleys and in Nordland. Rye cannot be grown successfully. Wheat occupies 1.5 per cent. only of the cultivated land. There is a very marked development in Norway in the direction of intensive stock breeding and dairying. As in Switzerland, cattle breeding, cultivation of cereals and of root crops and the " other branches " have given higher gross returns than in Denmark on the other hand, pig breeding and dairying have given lower gross returns than in Denmark. The gross return of Norwegian farms shows tendencies very similar to those of the farms of Switzerland. However, the gross returns from pig fattening, from dairying and from other branches are lower than in Switzerland, and the total gross return, instead of being, as in Switzerland, higher, is lower than in Denmark. The farming expenses have also the same tendencies as in Switzerland; but in Norway, labour is cheaper, ordinary expenses, expenses of upkeep and of depreciations are less heavy, all of which compensates in a measures for the inadequacy of the gross return. Actually, the net return, which is lower than that of Switzerland, is none the less higher than that of Denmark.

Soil conditions are more favourable to cropping in Sweden than in Norway; especially in the Śkåne and the agricultural plains of Central Sweden. Barley and oats, as in Denmark and Norway, have an important place in stock farming. The principal subsidiary crop is rye. The progress in the dairying industry in Sweden has resulted in an increase in pig breeding. Sown grasses occupy an important place in the rotation, the express purpose being that of maintaining the milk production.

The agriculture of Finland so closely resembles that of Sweden that the two can be studied at the same time. In Finland in consequence of the heat of the summer and the prolonged daylight hours of that season, the limit of cultivation is pushed far North. Rye is grown up to Lat. 68° N.; the limit for oats is between 64° and 65°; cultivation of potatoes is carried nearly up to the Arctic circle. Like Sweden, sown grass forms in Finland the basis of the system of rotation and barley and oats form the secondary crops. In 1927-28 the return from cereals and root crops in Finland was less satisfactory than in Sweden, a fact which seems to be due less to the yields than to the prices. The gross return from stock breeding and from dairying is lower in Finland than in Sweden. Sales of products of the land are less considerable in Sweden than in Finland. Farm expenses are higher in Sweden, especially labour costs, current expenses, costs of upkeep and depreciations, and it is for this reason that, without reaching the Danish level, the net return of farms in Finland is higher, although not much higher, than that of Swedish farms.

Finally, the agriculture of four countries, Poland, Lithuania, Latvia, and Estonia, may be treated together, since in these countries the farming is carried on much the same lines.

In Lithuania, Latvia, and Estonia, rye and oats, in Poland rye and potatoes are the main products of the soil. In Poland, one-third of the potato crop is fed to pigs. In 1927-28, the gross returns under every head are slightly higher in Poland than in the three neighbouring countries; it is for this reason that the net return was in Poland higher than for the Danish farms, whereas in the other three countries the net return did not attain the Danish level, the costs of production in the four countries being, practically, the same. Of all the countries under review these four produce at the lowest cost; the next in order are Austria, Finland, then Germany and Sweden; next come Overijssel and Norway, then Denmark and finally Switzerland. The less the expenditure, however, the lower, as a rule, is the level of the gross return. The countries where farm expenses are lowest--Poland, Lithuania, Latvia, Estonia, Finland and Austria—also have the lowest gross returns. Those with higher farm expenses—Switzerland, Norway, Denmark—obtain higher net returns. The countries with the most favourable balance, that is to say, with the highest net return—Switzerland, Austria, Norway, Poland--owe it to their more favourable geographical situation (in the case of Switzerland, Austria and Norway), to a better soil and more favourable price conditions. Switzerland is the only country which has a higher gross return than that of Denmark, owing to its fruit and vine growing. The farm expenses of the countries with intensive agriculture are highest, but it is not always these countries which have the most favourable balance. The well-known law of diminishing returns comes into play; a higher gross return is not obtained by going beyond a certain level of expenditure. This level, as has been seen, is not everywhere the same. It is difficult, if not impossible, to establish it, and it is not proposed to attempt it here. It is more useful and of more interest to see how the farming, and more especially the pig breeding in a given country has taken advantage of favourable market conditions or resisted the disastrous effects of the crisis. This enquiry will form the subject of succeeding articles.

JOS. DESLARZES.

THE DEVELOPMENT OF THE AGRARIAN REFORM IN SPAIN.

At the time of the initial application of the agrarian reform in Spain a detailed note on the Law dealing with this fundamental problem was published in this Review (1) Three years have now elapsed since the introduction of the reform, and now that some progress has been made towards realisation of the objects in view, it would seem advisable to make some comment on the more striking facts of those three years during which a number of further measures relating to the reform have been enacted.

The reform has undoubtedly been carried out with comparative slowness but the delay has been necessitated by actual conditions, since the problem

(1) Agrarian Reform in Spain. *Monthly Bulletin of Agricultural Economics and Sociology*. International Institute of Agriculture. April 1934 No. 4.

to be solved is far more complicated than that of the post-war agrarian reforms. In almost all the countries of Europe the purpose of the agrarian reform was to check, by increasing the total extent of the land held in small or peasant ownership, the growing tendency of the rural population to become a proletariat.

In Spain over a large part of the territory, the problem was of much wider scope: it was at once an economic, a social and a technical problem of immense range. It was essential completely to modify agricultural conditions over a large part of the territory of Spain, since in order to effect the desired grouping of parcels of land and to arrange for settlement plots such as would ensure the real efficacy and utility of the reform, it was necessary in the majority of cases actually to create these plots by means of large scale hydraulic and forestry engineering works. This special character of the Spanish agrarian reform is in fact the real explanation of its somewhat slow development.

The urgency of the need for the reform, it is true, had not been felt equally in all the Spanish provinces alike. In many of these it had been possible to defer application for a considerable time, since, in the absence of a landless class, the problem was not so much one of assignment of lands as of new enactments in respect of land tenure such as would bring the article of the Civil Code on this subject into fuller correspondence with the post- war changes in social conditions and in ownership. In other provinces, although there was much cultivable land and a peasantry well equipped with farm requisites and work animals, the land, in consequence of the farming methods followed, was lying waste or cultivated only in part, while the peasants had no holdings on which, with the help of their own equipment, they might have earned their livelihood. In other provinces it was necessary to carry out a complete land reclamation before any settlement of landless persons could be effected.

To the first group of provinces the law on agrarian reform was applied only recently in the course of the present year 1935 by an introduction of the provisions of the law on tenancy, which met the case for the time being. The second group of provinces was that which was most directly affected by the reform; in these there were lands and cultivators, and all that was needed were certain legal measures to bring the latter into direct contact with the lands. The development of the reform was more retarded in provinces where a radical change in the character of the soil was essential if the land was to be brought into a state to make any distribution possible. In the meantime the situation was met by employing on the works of land drainage and afforestation the rural element which would later cultivate the reclaimed lands.

The working of the reform is most plainly seen from the laws enacted for its gradual introduction and any judgment should be based on the practical results of these enactments. Some statement of the principles involved will be given here and the actual position will be examined with the help of the official statistics. Before however setting out this legislation as a whole, mention may be made of a law prior to the agrarian reform which contributed at least in part to the solution of the vast problem raised by its application, *i.e.*, the law on the confiscation of the rural property belonging to the persons who took part in the revolutionary movement against the regime on 10 August 1932.

The Law on the Confiscation of the Property of the Nobles. — The Spanish *Cortes* were on the point of bringing to an end the discussion of the law on the bases of the agrarian reform, when a political event, the revolutionary movement of 10 August 1932, gave the signal for the enactment of the law of 25 August 1932 in virtue of which all the rural property was confiscated that had belonged to those persons who took part in this movement. Thus, before the reform was finally decreed, the State had already at disposal an area of lands for assignment, and the expropriation of these, as being confiscated lands, involved no compensation of any kind.

The method adopted, in accordance with the provisions of the law, for declaring expropriable all these lands, was as follows: the courts drew up a list of all the persons who had taken part in the revolutionary movement and forwarded it to the Land Registry Offices, where within a certain period reports were prepared in which were shown the estates belonging to those implicated in the movement. These reports were referred to the Minister of Agriculture who ordered by decree that these lands should be registered under the name of the State in the respective registers of land ownership. The Minister further instructed the Inspectorate of the Social and Agricultural Services, in view of the fact that the Institute of Agrarian Reform had not yet been constituted, to act as guardian administrator of the confiscated lands, till such time as the Institute should be established.

The law provided that if the confiscated lands had been cultivated by thair owners, these latter should pass into the category of tenants, *i. e.*, they would lose their rights as owners. Further, in regard to lands that were rented, the tenant would continue to observe his side of the agreement, but that in both cases the State would become the owner and would collect the sums due as rent. If the owner had no other means of subsistence apart from such as are derived from the confiscated property, and if he was not capable of farming the land himself in direct tenancy, the law assigned him a pension sufficient to ensure him subsistence. It will be seen that this law, although severe, was also humane in that it allowed the owner to continue to farm his land, although as a tenant only, if he had formerly done so; while if the loss of the ownership would reduce him to poverty, the law assured him maintenance.

The consequences of this law of confiscation may however now be considered in practice. Cases in which the farms were directly worked by their owners were very rare and even in some of these cases, the owners refused to accept their new rating as tenants. Confiscation in no case involved destitution, as the owners belonged to the noble classes and the farms confiscated represented in most cases a very small part of their patrimony. The number of the farms held in tenancy was quite small as the lands were for the most part either *latifundia* or pleasure grounds. In consequence the State came into possession of a large area which could be used for the purposes of the agrarian reform.

On taking over these lands, the State proceeded to survey the area and to form parcels for assignment to the new farmer settlers. These operations were begun in 1933 and went on throughout 1934 and are being carried on in the present year of 1935.

According to the figures supplied by the Institute of Agrarian Reform (1) the number of individuals affected by the confiscation was 99 with a total area of 577,359 hectares.

The confiscated lands were distributed throughout the whole of Spain with the exception of four provinces in which there were no lands belonging to those concerned in the revolutionary movement; *viz.*, Almeria, Burgos, Orense and Teruel.

The 577,359 hectares referred to above represent the total area of rural estates which could be expropriated under the law directed against persons involved in the revolutionary movement. Actually, owing to special conditions of certain of these estates and on account of the extent of the work that it would be necessary to carry out in order to subdivide them and to establish the new settlers thereon, the whole of the area confiscated has not been assigned.

The following figures indicate the course of the expropriations and of the settlements made on the areas confiscated up to 31 December 1934.

Date of expropriation	Number of estates expropriated	Area (hectares)	Number of persons settled
31 March 1934	92	41,046	4,958
31 July 1934.	224	33,025	2,314
31 December 1934	332	15,062	1,337
Totals . . .	648	89,133	8,609

It appears from these figures that out of the 577,359 hectares liable to expropriation in virtue of the law of confiscation there have been actually expropriated 89,133 hectares corresponding to 648 estates and that there have been established thereon 8,609 new settlers.

On the other hand there are other estates equally coming under the law of confiscation which have not yet been finally expropriated on account of technical difficulties in regard to the formation of lots in the full sense and on which temporary occupancy only has been arranged. The following figures relate to these lands:

Date of expropriation	Number of estates expropriated	Area (hectares)	Number of occupiers established
31 March 1934	21	12,325	1,564
31 September 1934	10	4,334	582
31 December 1934	30	13,045	1,505
Totals . . .	61	29,704	3,651

(1) Boletin del Instituto de Reforma agraria. July 1934, No. 25.

Grouping the preceding figures, which have been supplied by the Institute of Agrarian Reform and therefore may be regarded as official, the total number and area of estates already expropriated, the number and area of lands temporarily occupied and the number of farming families settled, are as follows:

Estates	Number	Area (hectares)	Number of families settled
Expropriated	648	89,133	8,609
Occupied	61	29,704	3,651
General Total	709	118,837	12,260

The measures taken by the Government in virtue of this law have done much, as already stated, to facilitate the application of the reform. Moreover, the fact that some part of the areas confiscated is situated in the region most severely affected by the unemployment of farm workers, made settlement easy to arrange. In consequence an area, formerly consisting in latifundia, or property of low productivity, has been brought under cultivation, and in this way benefit has accrued to the nation as a whole and to the class of farm workers.

On the other hand, the loss to the owners affected by the confiscation will be temporary only, since once the moral effect of the revolutionary movement had passed and the nation had been guided into a policy of more moderate tendencies, a law was introduced by which compensation was granted to the owners of lands confiscated under the previous law.

The Institute of Agrarian Reform and the Provincial Councils (Juntas). — The law of the agrarian reform, under *Bases 2* and 10, provided for the establishment of the Institute and of the Provincial Councils. By a decree of 4 November 1932 the former was brought into existence and the Councils were constituted by a decree of 21 January 1933.

The application of the law of the reform is entrusted to the Institute of Agrarian Reform, the function of which is to effect thereby a transformation in Spanish rural organisation. The Institute is a corporate body with complete economic autonomy for the accomplishment of its objects. The administration is in the hands of an executive committeee and a general meeting composed, in both cases, of agricultural experts, legal experts, representatives of official agricultural credit, landowners, farm workers and representatives of the Government.

The Institute receives as endowment for the expenses of application of the reform an annual sum of 50,000,000 pesetas charged on the budget. In addition, if circumstances permit, it may receive other State advances, effect financial operations and issue mortgage bonds secured by real property, such values being negotiable on the Stock Exchange. The Institute enjoys exemption from all classes of taxation in the operations it carries on.

The Provincial Councils which have been set up and which function in all the provinces of Spain, are organisations subordinate to the Institute and

co-operating with it in the execution of the provisions of the law of reform. In spite of their legal dependence on the Institute the Councils have wide powers of an informative character and are authorised to carry out, by delegation, any recommendations and resolutions of the Institute to which it does not itself give effect.

In practice during the three years of the application of the reform the Institute met frequently for the purpose of enquiries and decisions in respect of its function of bringing into operation all the legal enactments relating to the agrarian reform. It has intervened directly, and by the intermediary of the Councils, in the attachment of the nobles' estates; and the decrees for the intensification of cultivation, to which reference will be made later, were carried out by the Institute. In short everything which relates to the reform is within the competence of this organisation.

The two main duties of the Provincial Councils are: to indicate in each communal area of their respective provinces, the lands set aside for the purposes of the reform, that is to say, to indicate the areas on which the new plots for assignment may be formed; and to draw up the census lists of the farm workers who may be settled on each communal area.

The agrarian reform has been applied, as a beginning, only to that class of provinces where it is most urgently needed, *i. e.*, to the provinces included in the regions of Andalusia and Estremadura and at Ciudad Real, Toledo, Albacete and Salamanca. The latest census taken before the enactment of the law of the agrarian reform, the census of December 1930, gave the following figures: for the communes and their population in the provinces mentioned: 1,957 communes with 7,249,484 inhabitants. Deducting 40 per cent. of this population, a very rough estimate of the proportion not living by agriculture, there remains a farming population of about 4,500,000 individuals, or, on the basis of the average size of the Spanish rural family, some 800,000 families. To settle this large number of farm workers on plots of their own is a difficult and costly undertaking which is being effected at last by the agrarian reform, through the intermediary of the Provincial Councils as delegates of the Institute in practice. Many years must elapse before the object can be finally attained; the Government, fully aware of the magnitude of the task and of its costliness, is arranging for a gradual accomplishment of the work, and has indicated the yearly quotas of settlement. Otherwise, if a rapid application of the reform were attempted, it would lose its effectiveness and would involve an expenditure which would react seriously on the national economy.

The statistics published by the Institute of Agrarian Reform in its Bulletin of December 1933 indicate the area of the lands liable to expropriation for the purposes of the reform in each commune in accordance with the reports issued by the respective Provincial Councils. These statistics refer to those provinces which have already been mentioned as standing most in need of the reform.

The following table shows these provinces, the number of communes in each and the areas designated as expropriable specifying in addition the type of cultivation carried on in each case.

On these areas, with their different types of crop, the plots will be gradually formed in view of the settlement of the farm workers who are in need of land. Some parcels may be occupied at once, others will require fundamental transformation before being parcelled. Such is the work carried out by the Councils, by delegation from the Institute of Agrarian Reform. Later the list of the farm workers is to be established and at no distant date, the application of the reform in these provinces which stand most in need of it will undoubtedly be satisfactorily accomplished.

Provinces	Number of communes in each province	Type of Cultivation					
		Grass land	Olives	Vines	Orchards	Pastures	Irrigated lands
Andalusia:							
Almería	40	12,000	7,500	4,000	4,000	16,100	400
Malaga	132	32,355	16,285	10,350	11,125	46.300	1,125
Grenada	151	109,850	47,350	29,150	38,750	142,000	—
Jaen	101	38,800	48,150	—	—	57,465	—
Cordoba	75	82,750	47,900	23,350	-	56,900	—
Seville	80	48,000	24,000	13,600	16,000	52,000	4,000
Cadiz	42	16,800	8,400	11,925	4,400	23,550	2,140
Estremadura:							
Caceros	214	127,400	36,150	21,400	21,400	158,500	—
Badajoz	157	53,920	26,400	15,000	15,000	108,700	—
Other regions:							
Ciudad Real	98	49,950	19,660	14,000	12,500	60,600	2,450
Toledo	285	111,000	58,100	32,000	36,000	148,500	—
Albacete	90	39,100	13,400	10,750	13,350	—	—
Salamanca	285	128,250	57,000	30,500	28,000	142,500	3,700

Intensification of Cultivation. — On 1 November 1932 a decree was published on intensification of cultivation applicable in the first place to the province of Badajoz; by Ministerial ordinances this decree was later extended to the provinces of Caceres, Ciudad Real, Toledo, Salmanca, Seville, Cadiz and Jaen. It was intended to replace the law on the agrarian reform the effect of which was inevitably delayed in view of the large number of its provisions. Since an unduly hasty introduction of the law might have been prejudicial to the national economy and was hence considered inadvisable, it was essential to adopt other measures to combat the unemployment among farm workers which was assuming serious dimensions in some provinces, and especially in Andalusia and Estremadura. In fact, once the cultivation work of the main crops was over the large majority of the peasants remained perforce unemployed and, in like manner, much of the land remained untilled. One of two attitudes might be taken by the Government in view of this situation; it might decide, either to give increased attention to the application of the law on forced labour (1), or to

(1) The law on forced labour, enacted one year before that of the agrarian reform, lost all its importance when the latter came into force; in addition on account of its radical tendencies its effectiveness had never been great.

anticipate the application of the agrarian reform. Both methods were taken into consideration. An increased application of the law on forced labour would not fully meet the economic problem and might create a dangerous situation in view of the radical tendencies of the law. On the other hand to anticipate the agrarian reform would to be rob it of its efficacy.

As the most effective means of meeting the anomalies of the situation, the decree on intensification of cultivation was enacted. This decree provides that in all the communes in which the unemployment crisis assumes a serious character, rural estates which by their position, type and state of their crops, may be considered suitable should be occupied either as a whole or in part, with a view to assisting workers by providing them with work over a definite period. The Institute of Agrarian Reform was instructed to indicate the lands to be so occupied and to draw up a plan of intensification of cultivation. The owner, tenant or cultivator of the estate so indicated, undertook to give work to farm workers, who were unemployed through no fault of their own, so far as the extent of the land allowed, on condition that such workers were domiciled in the commune in which the estate in question was situated. Such lands might also be farmed by associations or groups of unemployed workers, formed for the purpose of working the land. The State made some contribution to the farming by means of advances, to be repaid, guaranteed by the effect of the continued cultivation or by the standing crops.

As first results of the application of the decree in the province of Estremadura, all unemployed persons in the region were employed and all the land brought under cultivation, and such a period of peaceful labour followed as could not have been attained in any other way. Due account was taken of the two factors by which the social situation may be disturbed; capital and labour. Account was taken of labour in that it was assured its full development; capital received consideration in that it was not abandoned by the law which recognised the right of owners of occupied lands to intervene as regards the technical treatment given to their farms, while no such intervention could take place unless there was evidence of the efficacy and necessity of such intervention.

Moreover if the land to be occupied had been devoted to stock farming, provision was made for removing the industry to other areas where the same advantages in situation and maintenance would be ensured for the animals as on the area now required for a more intensive cultivation for the benefit of the human population. Thus all legitimate rights of ownership were safeguarded and all the reasonable aspirations of the workers themselves.

Before setting out the data available on the results of the decree on the intensification of cultivation, it should be noted that the main object of the legislator was to find a remedy for unemployment among the rural population, which, as stated, was of an exceptionally serious character in certain regions, and thus to further the purposes of the agrarian reform and to facilitate its application.

The last official statistics which are available on the number of workers placed on the land in virtue of the decree on the intensification of cultivation refer to 31 March 1933. The number of farm workers so placed at this date,

the number of farm estates on which intensification was carried out, the occupied area in each case, and the credits granted by the State for the expenses of occupancy and farming are shown as follows:

Provinces	Number of farms	Occupied area ha	Workers placed on land	Credits granted pesetas
Badajoz	648	53,921	18,750	6,355,613
Caceres	96	9,365	2,194	250,074
Ciudad Real	52	4,357	1,862	542,830
Toledo	101	5,068	1,585	626,034
Salamanca	5	874	270	50,717
Seville	47	6,614	1,040	695,607
Cadiz	72	7,640	2,394	1,682,990
Jaen	1	280	100	53,004
Totals	1,022	88,119	28,195	10,256,869

There should be added to the number of farm workers those who received parcels of land in virtue of measures of intensification of cultivation taken by the Government authorities and not, as already described, by the Institute of Agrarian Reform. This additional number of 5,253 workers brings up to 33,448 individuals, with their families, the total of those who obtained land as the result of the decree on the intensification of cultivation.

Good results were undoubtedly obtained from this application of legal measures facilitating the temporary occupancy of rural lands for the purpose of intensification of cultivation, but on the other hand, so soon as this temporary occupancy came to an end the good results disappeared. Accordingly by a new law, dated 11 February 1934, it was prescribed that farm workers who had done work of any kind on the lands occupied in virtue of the decree on the intensification of cultivation would have the right to remain in occupancy of the holdings until the crop was gathered. In view of the fact that the cultivation is mainly cereal, the date fixed as suitable was 1 August 1934.

In all the cases of occupancy for the purpose of intensification of cultivation, the workers established on the land are expected to pay, as annual rent to the landowner who can show legal claim to the parcels cultivated by them, the return on the parcel as assessed by the cadastral survey of rural lands. The Institute of Agrarian Reform is jointly and severally liable with the occupant for this payment.

On 1 August 1934, the date fixed by law for the abandonment of the parcels the occupants withdrew, but shortly afterwards when the period of sowings of the cereal crop came round, the Government, with a view to giving continuity to the occupancy, introduced a new law of 21 December 1934 in virtue of which the parcels in question might be occupied for another year by those who had previously benefited by the occupancy. Such further occupancy was however made conditional on the workers having fulfilled all the provisions of the law on intensification of cultivation, and also on there being no evidence

to show that they already were in possession of other holdings from which they could obtain a livelihood.

In this way, although in merely temporary occupancy, those of the land workers who chiefly needed State assistance were provided with suitable areas for cultivation while waiting for the definitive application of the agrarian reform.

The province in which the decree on intensification of cultivation received the fullest application was that of Badajoz. It has already been noted from the figures previously given that the number of the land workers placed on the land in this province exceeded that of all the other provinces taken together in which such placing occurred. This is due to the type of cultivation on the farms of this province. In most cases cereals are the main crop and are sown alternately on the half or on one fourth of the area of the farmland, the remaining area being used for stock which graze on the stubble left from the crop of the previous year. As nearly all the peasants of this region possess farm implements and draught animals but no land, the experts appointed by the Provincial Council to find land for unemployed workers had merely to transport the live stock to pastureland zones and to place the workers on the fallow. In this way lands were intensively cultivated which under the previous system of farming lay idle for one or two years.

To summarise, the legislative measures relating to the occupancy of the land have at present a temporary character only; they represent an experiment which resolves the situation for the time being while waiting for the application of the reform which should give a permanent character to this temporary occupancy. All these legislative measures go to show that Spanish law which formerly ignored the humbler classes is now taking a more humane form whereby these will be protected from the abuses of ownership, or, in other words, that ownership will be made subordinate to the public interest.

Of all the legal documents that relate to the agrarian reform the one which most reflects this humanitarian spirit is the recent law on tenancy, and a brief summary of this measure and some comment on it will form the conclusion of this article.

This law is apparently unconnected with the agrarian reform but it is in reality closely related to it; it forms the charter which will in future regulate, in accordance with strictly democratic and Christian principles, all the new forms of holding which will be brought into existence on Spanish soil by the agrarian reform.

It is not intended here to set out the law in full. A statement will merely be given of the purposes for which it was framed and of the underlying revolutionary principles and profoundly humane spirit which have inspired the preparation of the measure.

There is no influence so decisive on the economic aspect of production or on the social aspect of the life of the farming class as that of the equitable and proper regulation of tenancy agreements. In view of the character of Spanish agriculture and within the limits of a system which respects the principle of ownership together with the limits imposed by the social interest, the Spånish Government was bound to respect the institution of tenancy and to ensure its preservation, in the conviction that this institution, under good guidance, would certainly

result in positive social benefit. The obsolete legal forms would naturally be discarded and would be replaced by prescriptions in full accordance with the requirements of modern agriculture.

In virtue of these principles the new law on tenancy passed by the Spanish Cortes and enacted on 15 March 1935 favours the rights of farm tenants as the recognition of their stability on the land and of the contribution they make to the development of agricultural production. This law follows the lead given by the basic law of the agrarian reform in fixing the rent within the limits of the practicable, in taking into account the improvements made by the tenant on the farm, in fixing the duration of the agreement, in establishing, in the event of sale of the farm, a right of redemption (*retracto*) in favour of the tenant, in making reasonable allowances in the event of failure to pay, and other provisions of minor importance.

The more far reaching purposes of the law are indicated in its tendency to render absenteeism impossible. It is enunciated that land is an instrument of production and not merely a convenient means of drawing an income, and it is added that capital and labour should be so applied to the land as to ensure a return under economic market conditions and that for this end it should be farmed directly. The law therefore encourages the return to the land, a necessity which actual facts are imposing on all nations. The tenant is given security of tenure which stimulates him to make improvements likely to increase production, thereby giving him guarantees against the greed of land-owners who are anxious merely to raise rents, and lastly offering him some chance of obtaining full possession of the lands he rents. To the owner who sees in the land nothing more than the means of drawing an income, the collection of that income in the form of rent is duly guaranteed within the reasonable limits indicated by the law. If he shows any real interest in the land, everything will be made easier for him, since that interest, which will indirectly contribute to his well-being, will at the same time have the effect of increasing the agricultural wealth of the country and the national economy in general.

The object of the law is thus to bring about gradually without disturbances which might endanger the national economic life, the ideal so long contemplated by so many generations of land workers, *viz.*, that the whole product of the soil should be his who tills it.

So as to gain an idea of the changes brought about by the passing of the new law in the system of rural tenancy in Spain, the conditions to which the main prescriptions must conform are here compared with those to which they were hitherto adjusted.

As regards duration of the agreement, up to the present no term was fixed and everything depended on the goodwill of the owner of the land, whereas now a minimum period of four years is fixed.

Up to the time of the enactment, just as there was no fixed duration of the tenancy agreement, there were no extensions of it; now however it can be extended indefinitely and at the desire of the tenant.

Formerly the rent was fixed at will by the landlord; now the sum to be paid is fixed freely as before but it may be revised by the magistrate of court of first

instance if the tenant considers it too high and thus the law protects the tenant against abuse of the landlord's right.

Farming improvements, under the former legislation, did not always fall on the landowner and in many cases the fiscal charges were met by the tenants; at present improvements and fiscal charges are undertaken by the owner, except the tax on the tenant's profits, which represents hardly a third of the fiscal charges.

Moreover before the publication of the new law, the tenant was not compensated for making improvements on the farm, now this is done in accordance with a fixed scale which is fair and equitable.

Formerly the sale of a farm brought the tenancy to an end if the owner so wished. Now even after the sale, the tenancy agreement remains in force, except in the event of the new purchaser desiring to cultivate the farm directly.

In regard to the case of sale of a farm the new law also introduces an innovation advantageous to the tenant: it concedes to him the so-called right of redemption (*retracto*), i. e., in the case of sale of a farm, if the bids are equal the preference is given to the settler who has up to the time farmed it as tenant.

All these advances made by the law on tenancy are of the greatest importance and if rightly interpreted the law should regulate the relations between the landowner and the tenant to the benefit of the farming profession.

E. MARTINEZ DE BUJANDA.

AGRICULTURAL CO-OPERATION IN YUGOSLAVIA

(*Concluded*) *

III. — THE CO-OPERATIVE MOVEMENT SINCE THE UNIFICATION OF THE KINGDOM OF YUGOSLAVIA.

The Balkan wars and the Great War considerably disorganised the co-operative movement in all parts of what is now Yugoslavia and particularly in Serbia.

Owing to the absence of complete statistics and precise information it is not possible to reconstruct the co-operative movement even during the period 1920 to 1927. This period, however, may be considered as one of restoration and reconstitution of the co-operative movement.

A description will be given here in which an attempt will be made to give an approximate idea of this period, taking as a basis the fragmentary information available on a few co-operative Federations and Unions.

The "*General Federation of Serbian Agricultural Co-operative Societies*" may first receive mention. Thi is the largest co-operative organisation in Yugoslavia and statistical information in respect of it is available even during the years of disorganisation. In spite of all the difficulties encountered during the wars this Federation, which included 710 co-operative societies in 1911,

* The first part of this article appeared in the *Economic Bulletin* No. 6, pp. 219-226.

was able to show a membership of 1,468 Serbian co-operative societies in 1920 and of 2,021 at the end of 1922.

The establishment, however, of new Croatian and Slovene co-operative societies, and particularly the institution of Yugoslav agricultural co-operative credit societies by the Law of 12 June 1925, acted as a check on the progress of the Federation, and in 1926 the number of adhering co-operative societies had fallen to 1,958.

The "*Central Union of Croatian Co-operative Societies*", which in 1914 included 286 co-operative societies with a membership of 39,381, at the beginning of 1919 included 291 co-operative societies in Croatia and Slovenia and 64 Croatian co-operative societies in Bosnia and Herzegovina. The Croatian and Slovene co-operative societies developed rapidly during the period 1920 to 1927, but unfortunately precise and complete information is not available.

Following the period of reconstruction of the Yugoslav co-operative movement the first and most complete and detailed statistical information for the whole Kingdom was published in 1929 and referred to the date 31 December, 1927. A statistical table follows in which is illustrated the Yugoslav co-operative movement during the period 1930 to 1933 compared to the year 1927. The reader should note the fact that all information collected from various sources for preparation of this Table has been revised with the utmost care, but at the same time there may be some inaccuracies, chiefly due to the difficulty of obtaining official information which is exact and complete for the whole of Yugoslavia.

Of the 5,581 principal co-operative societies existing on 31 December, 1927, and grouped in 30 Central Unions, 65.9 per cent. were *co-operative credit societies* (3,676). These co-operative credit societies are almost all of the *Raiffeisen* type and for the most part unlimited liability societies.

It must also be noted that a third of these co-operative societies were founded by virtue of the Law "on agricultural co-operative credit" of 12 June 1925.

At the same period the second place was taken by the *co-operative societies for distribution and supply* with 976 societies, or 17 per cent. of the total number of principal co-operative societies. Very much further down the scale are found the other types of co-operative societies, among which the most important are the "*farming communities*" (323), that is, 6 per cent. and the *co-operative dairies and cheese making societies* (105), that is, 2 per cent.

Of co-operative societies of other types the number in no case exceeds 1 per cent of the total, with the exception of the artisans and workmen's co-operative societies.

This distribution of Yugoslav co-operative societies, of which nearly 85 per cent. belong to two categories, *i. e.*, co-operative credit and co-operative societies for distribution and supply, and 15 per cent. is constituted by different types of co-operative societies among which co-operative societies for agricultural production are poorly represented, clearly indicates the form taken by the economic structure of the country. It must at the same time be remembered that of the 579,000 members of co-operative societies existing on 31 December, 1927, almost 90 per cent. were farmers.

TABLE I. — *Co-operative Societies in Yugoslavia 1927-33.*

	31-XII 1927		31 XII 1930		31 XII-1931		31-XII-1932		31-XII-1933	
	Number	%	Number	%	Number	%	Number	%	Number	%
Co-operative credit societies	3,679	65.9	4,418	62.4	4,407	59.3	4,552	57.0	4,624	56.2
including: those formed under the law on agricultural credit	*(1,200)*	—	*(1 350)*	—	*(1,186)*	—	*(1,493)*	—	*(1,500)*	—
Co-operative societies for distribution and supply	976	17.1	1,172	16.6	1,211	16.4	1,363	17.3	1,566	19.0
Stock-farming and poultry-keeping societies	58	1.0	197	2.8	280	3.8	315	4.0	368	4.5
Co-operative dairies and cheese-making societies	105	2.0	126	1.8	181	2.4	159	2.0	170	2.1
Artisans and workmen's co-operative societies	60	1.1	92	1.2	93	1.2	122	1.5	116	1.4
Building and housing co-operative societies	70	1.3	81	1.0	89	1.2	91	1.2	88	1.1
Co-operative societies for viticulture and wine-making	28	0.5	62	0.9	81	1.1	87	1.1	90	1.1
Co-operative health societies	30	0.5	61	0.9	83	1.1	84	1.1	88	1.1
Co-operative societies for purchase and utilisation of machines	40	0.6	59	0.8	60	0.8	63	0.8	65	0.8
Central co-operative societies for supply of electric power	44	0.7	47	0.7	51	0.6	52	0.6	55	0.7
Co-operative fishing and sponge gathering societies	36	0.6	38	0.5	42	0.6	52	0.6	58	0.7
Co-operative grain societies	—	—	28	0.4	114	1.5	117	1.5	124	1.5
Co-operative oil factories	15	0.3	19	0.2	22	0.3	22	0.3	27	0.3
Other societies for agricultural production	15	0.3	19	0.2	68	0.9	173	2.2	157	1.9
Miscellaneous co-operative societies	105	2.0	126	1.8	110	1.5	118	1.5	161	1.9
Co-operative farming communities	323	6.0	503	7.0	536	7.4	449	5.7	470	5.7
Total of primary societies	*5,581*	*100.0*	*7,048*	*100.0*	*7,434*	*100.0*	*7,819*	*100.0*	*8,227*	*100.0*
Co-operative Unions and Central Societies	30	—	48	—	53	—	50	—	53	—
GENERAL TOTAL OF CO-OPERATIVE ORGANISATIONS	**5,611**	—	**7,096**	—	**7,487**	—	**7,869**	—	**8,280**	—
Membership figures of the co-operative societies	579,000	—	834,000	—	859,000	—	894,000	—	1,008,000	—

The preponderance of so-called *co-operative credit societies*, the majority being co-operative societies of the *Raiffeisen* type, that is, they supplied farmers with machinery and other agricultural implements for cash or on credit, shows the low earning capacity and consequently the poverty of the Yugoslav rural masses. Only the Slovene co-operative credit societies are solely credit societies *i. e.*, on the principle of the *Schulze-Delitzsch* co-operative societies.

The activity of the *co-operative societies for distribution and supply* is dual. In unfavourable seasons the greatest development is shown in the supply to farmers, for cash at cost price or on credit at a low rate of interest, of machinery, implements, selected seeds, artificial manures, etc. In the years when prices are high these societies tend to act as a check on the rise of prices, and supply farmers with necessities, such as food, clothing, etc., at a low price. In fact, the most marked development of these co-operative societies took place during the period of high prices, that is, from 1925 to 1929, while during the last crisis and the fall in prices their importance diminished considerably.

The general development of agriculture during the first eight years (1920-1928), following the establishment of the new Kingdom, was not very favorable, although, with the aid of the Government and the co-operative societies, the farmers have been able to meet the situation both as regards prices and the marketing of their products The crisis, which began in 1929, has also encouraged the rural masses to organise, not only for the purpose of obtaining credits and requisites at a low price, but also to obtain better prices and markets for their agricultural products.

For this reason the *co-operative societies for production and sale* have developed more rapidly since 1929.

For example, the number of stock-farming and poultry-keeping societies has increased considerably during the last few years. The stock-breeding societies however have not developed as might have been expected in view of the abundance of good natural grass land and the favorable conditions for sales and prices of live stock and particularly for live stock derivatives. The stock-farming and poultry-keeping societies are chiefly interested in breeding, crossing of breeds, and, less often, with importation of selected breeds or regulation of markets, etc. A fairly large number of co-operative dairies do not undertake butter or cheese making but sell the milk in liquid form. Other societies for agricultural production and sale, such as the co-operative vine-growing, co-operative fishing societies and co-operative oil factories, were not greatly developed up to the year 1929. This delay in the development of the co-operative movement for the production and sale of agricultural products, apart from reasons already indicated, may be attributed to the want of financial means, specialised technical staff and to the distrustful attitude of the farmers. Among other co-operative societies of various types, the *co-operative health societies* might with advantage be further developed, their number being, at the end of 1927, only 30. These co-operative societies, in direct collaboration with the central health institutions, have rendered great service to the rural masses. In addition to encouraging the production of fruits, vegetables, honey, wax, etc., on more hygienic

lines, these co-operative societies are also engaged in the treatment of diseases of farmers, contagious diseases of stock and plant diseases.

A number of doctors give their services to farmers and a large quantity of medicaments is distributed each year for cash or on credit at cost price.

Among the *central co-operative societies* for supply of electric power only a few produce electric current themselves, the majority supply their members with electric power from the nearest distributing stations, in this manner acting as consumers' co-operative societies.

The introduction of the new commercial policy for cereals, and especially for wheat, since 1930, necessitated the constitution of new *co-operative grain societies* which buy grain from farmers at a fixed price. Towards the end of 1930, there were established 28 co-operative grain societies and by 1931 the number had risen to 114 thus taking the sixth place in that year among the total of co-operative societies. The slight diminution in the development of these societies during 1932 is due to the very low production of that year.

As to other types of co-operative societies, the rapid increase in the number of *co-operative societies for agricultural production* deserves special mention. This increase is chiefly due to the foundation of co-operative societies for new branches of agricultural production. In fact, during the last few years, new co-operative societies have been established for the cultivation of *sugar-beet*, *tobacco*, *rosemary*, *fruits*, *hemp*, *hops*, *opium*, also for *bee-keeping*, *market-gardening*, *forestry*, etc.

This rapid development in the number of co-operative societies for agricultural production shows a new orientation in the Yugoslav co-operative movement as, through these societies, the rural masses, who had been severely affected by the last crisis, are endeavouring to organise the production and marketing of their products on a co-operative basis.

IV. — Present situation and activity of the Yugoslav co-operative societies.

After having reviewed the internal structure of the Yugoslav co-operative movement, mention must now be made of their numerical development and activity during the last few years.

It must be noted that more complete and detailed information is available for the co-operative societies grouped in Unions according to regions than for those forming Unions constituted according to the kind of activity of the societies. In view of the large number (22) of these regional Unions, an examination of a few of the principal ones will suffice.

All statistical information available relating to the activity of these Unions is official and is taken from the Report of the General Federation of Co-operative Unions of Yugoslavia. All figures refer to the date 31 December 1932. Of the total number of 6,376 co-operative societies, excluding the 1,493 special agricultural co-operative credit societies, existing in the country on 31 December, 1932, only 92 were not federated. It will, therefore, be seen that the co-operative movement in Yugoslavia is almost entirely centralised.

The most important Union in Yugoslavia, the *General Union of Serbian Agricultural Co-operative Societies*, was founded at Belgrade in 1895, and on 31 De-

cember 1932 grouped 2,501 co-operative societies, 1,136 with unlimited liability and 1,373 with limited liability. According to the rules, the total subscription for a single share is fixed at 500 dinars and the liability of members towards the Unions at 10 shares. Since 17,570 shares had been subscribed on 31 December 1932, the total guarantees available to the Union amounted to 87,800,000 dinars. The activities of the 2,501 co-operative societies federates in this Union are as follows: 1,140, credit; 1,018, distribution and supply; 54, dairying and cheese-making; 96, grain; 60, cattle-breeding; 35 viticulture and œnology; 26, sugar-beet; 17, fruits; 16, poultry-keeping; 3, fishing; 3, artisans; 4, pig-raising; 2, sheep farming; 2. bee-keeping; 1, opium; 1, hemp; 1, rice; 1, pasture; 6, utilisation of water; 10, various.

The 2,501 Serbian agricultural co-operative societies, or more than 40 per cent. of the total number of Yugoslav co-operative societies, are centralised in 7 district Central Unions, and one Audit Union. The total number of members at this time was 131,910, that is, about 12 per cent. of the total number of members of Yugoslav co-operative societies.

The total turn-over of the General Union of Serbian agricultural co-operative societies had, during the year 1932, reached the figure of 3,000,000,000 of dinars as against 1,800,000,000 of dinars in 1931.

In spite of the rapid increase in the total turn-over, the receipts and expenditure showed a slight diminution in comparison with the preceding year. Receipts amounted to 241,800,000 dinars and expenditure to 242,500,000 dinars. The Union had sold various kinds of merchandise during the year 1932, amounting to the value of 106,600,000 dinars as against 180,000,000 dinars in 1931. The savings deposits also showed a decided reduction, while withdrawal of savings had increased. In addition, the repayment of loans granted showed a marked diminution following the Law for the relief of debtor farmers. Consequently the loans granted were reduced to 42,400,000 dinars as compared with 158,500,000 dinars granted in 1931.

In 1928, the *Union of Serbian Agricultural Co-operative Societies* was founded at Novi Sad and in 1932 grouped 361 co-operative societies with 31,592 members. This Union was formed by the former Union of Serbian agricultural co-operative societies, founded at Zagreb in 1898, amalgamated with the General Union of Serbian agricultural co-operative societies at Belgrade in 1922 from which it was again detached in 1928. The majority of the societies grouped in this Union are co-operative credit societies (306), followed by the co-operative societies for distribution and supply (20), co-operative cattle-breeding societies (13), dairying and cheese-making (6), vine-growing and wine-making (5), poultry-keeping (3), artisans (2), and the remainder consisting of one society for each of the following: grain, market-gardening, production of vine-stocks, pig-breeding, fishing. In 1932 the turn-over amounted to 624,800,000 dinars as against 649,500,000 in 1931. The sales during the year 1932 were almost nil while in 1931 they represented 62,900,000 dinars. Loans granted in 1932 amounted to 28,200,000 dinars as compared with 15,500,000 dinars in 1931.

The *Union of Slovene Co-operative Societies* groups a smaller number of co-operative societies, but may be classified in the secondary grade of import-

ance. It was founded in 1899 at Lubljana and is now known as the *Co-operative Union.* Up to the end of 1932, it included 663 co-operative societies with 151,700 members. It will be seen that, though it groups a smaller number of co-operative societies compared to the Serbian Union, the Slovene Union has a larger number of individual members. In 1932, half the societies in this Union were co-operative credit societies (336); there were also 76 co-operative societies for distribution and supply, 54 co-operative stock-farming societies, 37 dairying and cheese-making societies, 37 co-operative societies for utilisation of machines, 30 co-operative housing societies, 22 central electric societies, 19 co-operative artisans' societies, 10 co-operative vine-growers societies and others.

The movement of capital of this Union is also more marked than is the case with other Unions, and is exceeded only by that of the Serbian Union and that of the Union of State officials' consumers' societies. In fact, although there was, as compared with the figure of 1,219,000,000 dinars in 1931, a considerable reduction in 1932, the movement of capital of the Co-operative Union in that year was still 592,300,000 dinars. The business transactions also showed a decided reduction in 1932, the receipts being 23,200,000 dinars as compared with 88,300,000 in 1931, and expenditure being 23,200,000 dinars as against 87,700,000 Following the reduction in savings deposits from 130,000,000 to 81,900,000 and in repayment of loans from 54,400,000 to 25,200,000 the loans granted fell from 56,200,000 dinars in 1931 to 16,700,000 in 1932.

The other Slovene co-operative societies are centralised in the *Union of Slovene Co-operative Societies* founded in 1927 at Lubljana. The membership is smaller than that of the earlier Union, although at the end of 1932 including 338 co-operative societies and Central Unons with a membership of 80,856. This Union, like the first, is composed of different types of co-operative societies, the largest number being that of the co-operative credit societies (149). Next come 26 societies for dairying and cheese-making, 24 central electric societies, 22 co-operative societies for distribution and supply, 21 co-operative housing societies, 19 stock-farming societies, 16 for the utilisation of machines, 12 for the utilisation of water, and 13 artisans' societies. Movement of capital amounted to 112,800,000 dinars in 1932 as against 232,400,000 in 1931. The sales of this Union are very limited and in 1932 amounted to 35,000 dinars and 78,000 in 1931. During the year 1932 loans were granted to the sum of 22,200,000 dinars as against 17,300,000 dinars repaid.

The Croatian co-operative societies are grouped in three Unions, the principal being the *Central Union of Croatian Agricultural Co-operative Societies,* founded at Zagreb in 1910. At the end of 1932 this Union had 4,907 subscribed shares at 100 dinars each with a " multiple " of liability of members towards the Union fixed at 10 shares. The total of guarantees in 1932 was 4,900,000 dinars. In 1932, of the 336 co-operative societies, including 1 central co-operative society, 302 were unlimited liability societies and 34 had limited liability. Almost all the societies were co-operative credit societies (313). At the end of 1932 the Union had a membership of 47,108 persons. The other types of co-operative societies were as follows: 6 co-operative societies for distribution and supply, 5 for live-stock insurance, 4 for vine-growing, 3 artisans' societies, 2 for dairying, 2 for

forestry and 1 for bee-keeping. Like the other Unions, this Croatian Union suffered a reduction in the total turn-over during the year 1932 in comparison to 1931, the turn-over having fallen from 450,000,000 dinars in 1931 to 316,700,000 in 1932. The sales, however, increased from 7,800,000 dinars in 1931 to 11,100,000 in 1932. The savings deposits in 1931 also showed a considerable increase, amounting to 62,100,000 dinars as against only 2,600,000 in 1931, and the withdrawal of deposits amounted to 40,100,000 dinars as compared to 500,000 in 1931. This financial situation allowed the Union to maintain the amount of loans granted at about the same level as as in 1931, that is, 12.7 as against 12.1 million dinars.

While dealing mainly with agricultural credit the Union effected purchases of cereals in 1932 for a sum of 6,800,000 dinars as compared with 5,900,000 in 1931. It has also been largely engaged in the export of live stock, and through the intermediary of the Union 1,044 head of cattle were sold in 1932 for a total value of 1,400,000 dinars, there being no sales in 1931, while hay was sold to the value of 1,800,000 dinars as compared with 300,000 dinars worth in 1931.

The second Croatian Union, the *Co-operative Union*, founded at Zagreb in 1920, included 156 co-operative societies in 1932, (including 2 central co-operative societies), of which 73 were unlimited liability and 83 limited liability societies. In 1932 the membership was 32,783 persons. The majority of societies in this Union are co-operative credit societies (102). The number of co-operative societies for distribution and supply in this Union is much larger than in the preceding Croatian Union and in 1932 amounted to 16. Among other co-operative societies grouped in this Union, are 8 co-operative grain societies, 6 dairying and cheese-making societies, 3 vine-growing and wine-making societies, 3 artisans' societies and 2 publishers' and booksellers' societies. In addition, there is one society for each of the following: forestry, sheep-breeding, horses, poultry-keeping, fishing, irrigation, life insurance, and 5 various.

On 31 December 1932, the total turn-over of this Union had fallen to 89,300,000 dinars as against 141,400,000 in 1931. Sales in 1932 amounted to 2,700,000 dinars as against 3,300,000 in 1931. Savings deposits had greatly diminished and had fallen from 9,000,000 dinars in 1931 to 1,000,000 in 1932. Thanks, however, to a fuller repayment of loans than in 1931 (8,800,000 dinars as against 5,900,000) granting of loans 1932 remained nearly as in 1931 (7,300,000 millions as against 8,500,000).

The third Croatian union, after going into liquidation in 1924, was re-established at Zagreb in 1928 as a central co-operative society under the name of *Croatian Agricultural Society*. The amount of subscribed shares of this Union is much higher that that of the two preceding Croatian Unions; in fact, it is fixed at 500 dinars and at a multiple of 20 for the liability of members towards the Union.

With the 3,482 shares subscribed at the end of 1932, the total guarantees had reached the figure of 34,800,000 dinars. In 1932 this Society included 126 co-operative societies, all with limited liability, with a total membership of 13,145 persons. There are no co-operative credit societies included in this Soc-

iety. Of the 126 co-operative societies, including two central co-operative societies, the majority belong to the category of co-operative societies for distribution and supply (62) and the remainder to that of co-operative societies for agricultural production, there being 30 grassland cultivation societies and 18 co-operative stock farming societies. The other societies are as follows: 6 for dairying, and cheese-making, 3 co-operative grain societies, 6 societies for vine-growing poultry-keeping, slaughtering, onion-growing, grain, etc.

In 1932 the movement of capital amounted to 14,900,000 dinars as compared with 12,900,000 in 1931. From 2,700,000 dinars in 1931, sales dropped to 1,300,000 in 1932.

On 31 December 1932, the total turnover of the 22 Unions was 7,447,000,000 dinars as against 7,450,000,000 in 1931. Sales made by all the Unions taken together fell from 309,500,000 dinars in 1931 to 168,800,000 dinars in 1932. The amount of loans granted also diminished from 439,100,000 dinars in 1931 to 251,300,000 in 1932, this being chiefly due to the great reduction in the repayments of loans granted and the reduction in savings deposits.

In addition to these 22 Unions which centralise the various types of co-operative societies, generally according to regions and districts rather than according to the character of their activity, there are a fairly large number of Central Co-operative Societies. At the end of 1932 there were 22 of these Societies the majority being co-operative societies for agricultural production with headquarters in the areas of production.

The Central Co-operative Societies are grouped in six towns as shown on the accompanying table:—

	Head Office
1. – Central Co-operative Society for agricultural purchasing . . .	Belgrade
2. – *Samopomoć* Central Co-operative Dairy Society	»
3. – Co-operative Agricultural Union	»
4. – Union of co-operative societies for selective pig-breeding . .	»
5. – Union of co-operative societies for grassland cultivation . . .	»
6. – Central Co-operative Live Stock Insurance Society	»
7. – Central Trading Society of agricultural co-operative societies.	Novi Sad
8. – *Agraria* Central Co-operative Agricultural Society	»
9. – Central Pig-Breeding Co-operative Society	»
10. – Union of German stock-breeding co-operative societies . . .	»
11. – *Avis* Central Co-operative Poultry keeting Society	»
12. – Central Co-operative Society of agricultural co-operative health societies.	»
13. – Accounting Office of agricultural co-operative societies . . .	Split
14. – Union of Co-operative Societies	»
15. – *Pharos* Central Society of the co-operative societies for cultivation of rosemary.	»
16. – Central Society of co-operative fishing societies	»
17. – Central Organisation of co-operative oil-factories	»
18. – Central Society of co-operative vine-growers' societies	»
19. – Agricultural Union	Lubljana
20. – Central Dairies	»
21. – *Ekonom*, Central Agricultural Co-operative Society	»
22. – Union of co-operative societies for selective pig-breeding . .	»

The total turn-over of these 22 Central Co-operative Societies has been considerable in spite of a slight diminution in 1932. In 1932 it fell to 1,464,000,000 dinars as compared to 1,731,000,000 in 1931. Sales in 1932 amounted to dinars 172,300,000 as against 180,400,000 in 1931.

V. — Conclusion.

The Yugoslav co-operative movement has made great progess during the last 5 years in spite of the absence of uniform legislation for all Yugoslav co-operative societies throughout the country, the inadequacy of financial means and of specialised technical staff, the existence of a too pronounced regional spirit and finally, the confusion resulting from the simultaneous membership of the co-operative societies of various Unions and Central Societies.

The last economic crisis has stimulated the foundation of new co-operative societies, with the help of which the farmers have tried to combat, or at least reduce the effects of, the crisis.

On the other hand, the Government, in some anxiety from the development of the crisis, has favoured, and in some cases even imposed, the establishment of new co-operative societies, *viz.*, the agricultural co-operative credit societies established by the Law of 12 June, 1925; the co-operative grain societies founded in connection with the institution of the Privileged Society for the purchase of cereals, etc. Naturally, as stated in Part I, chapter II, not all the legislative measures have had a favorable influence on the development of the Yugoslav co-operative movement. For example, the Law of December 1932, for the relief of debtor farmers granted considerable facilities to these farmers, but at the same time, seriously affected the interests of numerous co-operative societies, especially co-operative credit societies. These adverse results were, however, immediately negatived by a special Decree of 23 November, 1933, on the protection of co-operative credit societies and their Unions.

* * *

As this article was about to go to press statistical information was received on the situation of the Yugoslav co-operative movement on 31 December, 1933.

An examination of these figures, which have been added to the Table on page 265, will show that in 1933 the Yugoslav co-operative movement had made another step forward.

The annual increase of the total number of co-operative societies in 1933 was the same as in the preceding years, but the increase in the number of members had doubled. It is interesting to note the development in the new tendency to extend the co-operative societies for agricultural production. In fact, while on 31 December 1927, the co-operative credit societies, together with the co-operative societies for distribution and supply, represented about 85 per cent. of the total number of co-operative societies, at the end of 1933 their number was only 75 per cent. in spite of the establishment of 1,538 new societies during the last six years.

On the other hand, the number of other co-operative societies, composed chiefly of co-operative societies for agricultural production, has risen, during the same period, from 15 to 25 per cent. of the general total.

The most marked progress has been made by the co-operative stock farming societies and poultry-keeping societies, co-operative grain societies, co-operative societies for dairying, cheese-making and wine-making, co-operative oil factories and co-operative societies for the production of rosemary, etc.

The total turn-over of 22 Unions of co-operative societies, united in the General Federation, which includes over 90 per cent. of all the co-operative societies, reached, on 31 December 1933, the sum of 6,660,000,000 dinars as against 7,447,000,000 on 31 December 1932. Sales in 1933 represented a value of 189,700,000 dinars as compared with 168,800,000 in 1932. Loans granted have, on the other hand, increased up to 416,100,000 dinars, that is, the grants have almost reached the total of 1931, namely, 439,100,000 dinars, as compared with 251,300,000 granted in 1932. Savings deposits amounted to 311,000,000 dinars.

G. SEVERINE.

HAIL INSURANCE IN GERMANY (*Concluded*) (1).

II. — PUBLIC INSURANCE.

There is a great wealth of material relating to the history of public hail insurance in Germany.

Before the foundation in 1844 of the Bavarian Institute of Public Hail Insurance, State institutions were set up in Lippe-Detmold, Württemberg and in Hesse. These attempts at organising State hail insurance failed.

Public insurance in Lippe was organised on the basis of the system of initial premiums and supplementary payments, these latter being limited. In the event of the initial premiums and supplementary payments not being sufficient, the compensation payments were proportionately reduced. In addition the *Landesrentei* paid an annual supplementary contribution. The competition, however, of private societies with their system of full indemnification of losses resulted in 1883 in the cessation of the activities of the State institution, following on a gradual diminution of business which in fact never attained a large figure.

At Württemberg and Hesse premiums were classified in accordance with the risks, while at Lippe the starting point was a uniform contribution for every 100 thalers of insured risks. Classification of premiums was not however fully adopted in the two countries first mentioned. Compensation payments were reduced in the case of insufficient receipts; at Württemberg payment was made in full on one occasion only while in the year before it was possible to give compensation for 10 per cent. only of the losses, and in course of the years

(1) *Erratum*: In Part I of this article appearing in the June number on p. 228, line 17, for 1912 *read* 1812.

when operations had been most numerous (1845-1847) compensation payments had varied between 25 and 34 per cent. of the losses incurred. The premiums were undoubtedly not proportional to the insured risks, for at Württemberg, for example they amounted on an average to about one per cent. of these risks. As regards State subventions a contribution was fixed corresponding to the annual reductions of the land tax. The Württemberg Institute came to an end in 1862 and the Hesse Institute in 1864 (1).

In 1884 the Public Hail Insurance Institute was founded in Bavaria This Institute is still in existence, and on account of the interest attaching to it the subject commands some further attention here. This organisation is in fact often quoted as a typical example of the organisation of public insurance, a problem which continues to take a prominent place in the discussions of circles interested.

It should be noted that before the Hail Insurance Institute of Bavaria was set up by the coming into force of the law of 13 February 1884, there were in existence the following institutions operating hail insurance in this State: the *Hagelassekuranzverein für den Isarkreis* which was established on the basis of the law of 28 December 1831 and later transformed, with extension of its field of operations, into *Hagelversicherungsverein für das Königsreich Bayern;* four mutual insurance societies: the *Allgemeine deutsche Hagelversicherungsgesellschaft*, the *Borussia*, the *Gesellschaft zur gegenseitigen Hagelschadenvergütung*, the *Norddeutsche*; four joint stock companies: the *Vaterländische*, the *Magdeburger*, the *Union* and the *Kölnische*. The number of farmers insured by these societies before 1884 was 12,600; in other words, 2.5 per cent. out of the 600,000 farms in Bavaria were insured. The total sum insured amounted to about 26,000,000 marks.

During the years 1861 to 1874 the advantages had been constantly urged both in the Bavarian Parliament and in farming circles, of establishing a State Hail Insurance institution; it was however only on 1 March 1884 in virtue of the law of 13 February that a public institution was set up affiliated with the National Fire Insurance Institute (2).

The Public Hail Insurance Institute was organised as follows under the law of 13 February 1884.

This institution, founded on the principle of mutual insurance, received the character of a public establishment with all the privileges assigned to benevolent institutions. Members were admitted at their own request and retained membership so long as they had not notified in accordance with certain recognised forms their intention of resigning, The insurance year began on 1 March. The premium was payable each year from that date; if the insurance had been taken out in the name of several persons, these persons were jointly and severally liable

(1) Vortrag gehalten in Prag am 3 April 1930 von W. Rohrbeck über die öffentliche Bewirtschaftung der landwirtschaftlichen Versicherung in der Welt etc. Verlag: Verband der wechselseitigen deutschen Versicherungs-Unternehmungen in der Tschechoslowakei. p. 2 et 3.

(2) Landwirtschaftliches Jahrbuch für Bayern 1931. Munich p. 574.

Denkschrift des Staatsministeriums des Innern uber die Neuordnung der Hagelversicherung in Bayern p. 5.

for the payment of the premium. Requests for admission and resignations were addressed to the municipal authority which was responsible for transmitting them to the authority in charge of the administration. On the occurrence of any loss or damage, the insured person must within two days, inform the municipal authority which had to notify the authority in charge of the Administration within 24 hours. If a valuation was required, this authority appointed an expert valuer, the presence of the insured person was not compulsory. If the insured person was not satisfied with the estimate of the valuer, it was open to him to claim within a week a second valuation which would be definitive. The right to compensation might not be ceded or pledged to a third party. Any person convicted of deception or attempt to deceive, to the prejudice of the Institute, lost his claim to the compensation. The State granted to the Institute a capital of 1,000,000 marks, and assigned to it also an annual payment of 40,000 marks. A reserve fund was to be constituted by means of (*a*) interest on the capital, (*b*) the interest on the reserve fund, (*c*) the membership entrance fees, (*d*) compensation payments not claimed within the specified periods, (*e*) the balance of each financial year after the settlement of the compensation claims and disbursements for the administrative expenses.

The administration of the Institute was in the hands of the Royal Chamber of Fire Insurances, Section of hail insurance (1).

The law of 13 February 1884 established the system of fixed premiums with no undertaking as to additional rates but with the possibility of reduction of compensation payments. This reduction had naturally to be effected in the years when the funds at the disposal of the Institute were not sufficient for full compensation of the losses. Such right of reduction was limited. The reserve fund had to be utilised in each year up to the maximum limit of one fourth of its total amount, the object being to avoid reductions exceeding 80 per cent. of the compensation payments due.

This law has been amended several times. Attention will be confined here almost exclusively to the amendments affecting the system of premiums and of compensation payments, which are of special interest.

During the period 1918 it proved possible to pay the following percentages on the compensation payments as fixed in accordance with the general conditions of insurance: *viz.*, 100 per cent. eighteen times, 97 per cent. once, 90 per cent. once, 85 per cent. twice, 80 per cent. nine times, 75 per cent. twice, 67 per cent. once and 57 per cent. once

The amount of the average premium was fixed each year in such a way as to make it possible, with the addition of one fourth of the existing reserve fund of the interest on that fund, and with the State contribution, to pay at least 80 per cent. of the claims on losses incurred during the year.

In the case of especially disastrous years when the losses exceed the average this procedure was not sufficient; on the whole however it has been maintained.

(1) Annuaire de legislation etrangere publie par la societe de legislation comparee Paris 1884, p. 214

It was noted that with this system a considerable increase took place in the membership of the Institute: from a total of about 7,000 members in the course of 1884 with sums insured up to about 11,000,000 marks, the membership became 177,000 members in 1918 with sums insured up to about 393,000,000 marks. Even in the course of the years 1900, 1903 and 1908 in which very severe hail storms were experienced (the losses amounting to 2.67, 3.05 and 3.28 per cent. and compensation being possible only up to 67, 57 and 76 per cent.), confidence in the Institute was unaltered as is shown by the increase in the membership in the course of the subsequent years.

The fixed premiums were established taking into account the local risk according to the geographical position of the different communes, and the specific risk varying according to the different degrees in which crop products are affected by hail. In consequence of the diversity in the local risk, the localities were divided into classes, At the time of the setting up of the Institute, there were 15 such classes, in 1911 the number had risen to 25, later again reduced to 15. Crop products were divided into nine classes according to the degrees to which they suffer damage in the event of hail storms. This division remained in force up to 1919; in the course of that year the number of classes was reduced to six and in 1920 to four.

The system of fixed premiums with possibility of reduction of compensation payments was abandoned in 1917 in so far as, by making an additional payment of 10 per cent, on the basic premium with an undertaking to make further payments without limitation as to amount, the farmer was entitled to receive in all cases the full compensation for losses incurred.

From 1918 to 1927 the insured persons have had the opportunity, either as in the past on the basis of fixed premiums with reductions if necessary of compensation payments, or by the system of basic premiums with an undertaking to make additional payments without limitation of amount with corresponding claim to full compensation of losses.

In 1918, 1919 and 1920, the additional payments amounted to 10 per cent. of the premiums; in 1921 to 20 per cent.; in 1922, to 145 per cent.; in 1923 to 10 per cent.; in 1924, to 15 per cent.; in 1925 to 45 per cent.; in 1926, to 130 per cent.; in 1927 to 160; in 1928, to 33 per cent. In the course of the years subsequent to 1928, the proportion of members who had undertaken to make additional payments was 99.5 per cent. When however in 1926 and 1927 in consequence of the heavy damage the burden of the additional payments rose to 130 and 160 per cent., 24,939 members out of 99,500 in 1927, and 15,174 out of 84,100 in 1928 requested to be freed from the undertaking to make additional payments.

In conformity with its character as a benevolent institution (*Wohlfahrtanstalt*), the Institute, in view of its ever increasing membership and increase in reserves, has granted progressive measures of relief to members, as for example, reduction of basic premiums, abandonment of the principle of non-compensation for losses amounting to less than 10 per cent. of the insured sum, and of that of limitation of payment on surplus products, etc. When however in consequence of the inflation, the reserve disappeared, the Institute was obliged to impose in 1924

an additional payment of 15 per cent. of the basic premium, in 1925 one of 45 per cent., while in 1926 and 1927 additional payments of 130 and 160 per cent. were imposed. Withdrawal of members in consequence took place on a larger scale, 25,000 having already resigned membership in 1923 in consequence of the Institute's having paid compensation claims in depreciated paper money in 1922. In 1924 the membership fell by about 15,000, in 1925 by 7,000, in 1926 by 10,000, in 1927 by 26,000 and in 1928 by 28,000, so that only the heaviest risks remained insured by the Institute.

The smaller risks were not insured or were covered by private societies, which precisely at this moment became keener competitors and not being handicapped by any obligation to accept all and every proposal for insurance, could limit themselves to seeking and accepting the most favourable risks.

The very unfavourable results from 1924 to 1927 compelled the Government to submit to the *Landstag* in February 1928 a report showing the position of the Institute together with recommendations as to the best means for improving the situation thus revealed. These recommendations proposed an arrangement making it possible to limit the additional payments undertaken by members to a certain figure, and to obtain any further sums required through loans made to the Institute by a third party to whom such loans were to be repaid in favourable years, and for which the State was to assume liability. It was suggested that the limit of the additional contributions should be fixed at a third of the basic premium, and this limitation was introduced by a law dated 12 April 1928.

At the same time the Council of the Administration of the Institute was authorised to borrow whenever the initial premiums and additional payments were not sufficient to meet the indemnity claims. While in 1928 the insured persons were still able to choose between the earlier system and the new one, from 1929 onwards the insurance operations were conditioned by the fact that additional payments were limited to one third of the initial premium. As the result of the coming into force of this law of April 1928, it became necessary during that year to arrange to borrow 3,500,000 Rm from the State Fire Insurance Institute, and during 1929 a further amount of about 12,000,000 Rm. (1).

In consequence, the system of the law of 1928 was not maintained and after long discussions there was re-introduced by a law dated 12 April 1930 the power to reduce compensation payments without any limit being fixed to such reduction together with a limited obligation in respect of additional payments. It is laid down by art. 13 of this law that the compensation payments must be made in the full proportion established by the general clauses governing insurance. If the sources of income are not sufficient to meet these payments, then these latter must be reduced until receipts and expenditure balance each other. If the receipts do not suffice to pay 80 per cent. of the compensation, recourse must be had to the reserve fund in the proportion of one fourth of the amount of this fund. If even in this case a proportion amounting to 80 per cent. of the compensation claims

(1) Denkschrift des Staatsministeriums des Inneren, already quoted, p. 17 et seq.

cannot be met, the Institute is empowered to impose an additional payment up to 50 per cent. of the insurance premium. Even when it is not possible by these measures to pay off a least 80 per cent. of the compensation claims these latter must be still further reduced (1).

These measures were rendered necessary by the severe hail storms which occurred after 1924 and especially after the disastrous season of 1929, and their application has made it possible to continue public hail insurance in a country like Germany which suffers so severely from the effects of hail (2).

The following are the most important figures relating to the operations of the Institute in 1932. The number of insured persons was 108,307 with insured risks of 190,165,160 Rm. The premiums paid amounted to 4,485,432 Rm. Receipts for additional expenses amounted to 171,152 Rm. and the State contribution appearing in the budget to 600,000 Rm. The number of insurances were nearly the same as in 1931, while in 1931 the insured total had been 199,928,670 Rm., or higher by 9,800,000 Rm. The reduction is due mainly to the price decline. The annual receipts were 200,000 Rm. lower than those of 1931.

In 1932 compensation payments were made as in 1930 without any necessity for recourse to additional payments. This is also true of 1931, with the difference that as regards the latter year, it was necessary to reduce the compensation payments by 16 per cent. in consequence of the severe hail falls. The number of cases of damage in 1932 was 9,854 as compared with 18,019 in 1931. The claims compensated amounted to 1,502,750 Rm., or 0.79 per cent. of the total insured. The total expenditure, including administrative and valuation charges, was 2,930,660 Rm. The surplus amounted to 2,352,310 Rm. (3).

* * *

Passing to the organisation of the Hail Insurance Union (Incorporated) (*Öffentlichrechtlicher Hagelversicherungsverband*) it may be noted that this Union was established in 1928 and that it groups the majority of the public fire insurance undertakings dealing also with hail insurance in Prussia. This institution has taken the place of the joint insurance organisation of public fire insurance institutions operating hail insurance (*Mitversicherungsgemeinschaft der die Hagelversicherung betreibenden öffentlichen Feuerversicherungsanstalten*), formed in 1925, which had to be transformed in consequence of the disastrous season of 1927. On the basis of observation made in the course of three financial years it proved to be advisable to modify the insurance operated by the organisation in question, in such a way as to effect a higher compensation of risks and a working of this branch of insurance on a more uniform basis (4).

The Union, the head office of which is at Berlin, is a corporate body duly constituted by amalgamation of six public fire insurance societies, *viz. Feuer-*

(1) Annuaire international de législation agricole de l'I. I. A., 1930, p. 859.

(2) Geschaftsberichte der bayerischen Versicherungskammer für 1918 mit 1929. Munich p. 42. Landwirtschaftliches Jahrbuch fur Bayern 1931 p. 585.

(3) GOETZE: Die Ergebnisse der deutschen offentlichen Hagelversicherung im Jahre 1932. *Die Versicherung* of 8 December 1932 p. 777.

(4) Assekuranz Jahrbuch, Vienna and Leipzig. Volume 48, p. 358.

sozietät der Provinz Brandenburg, Niederschlesische Provinzial-Feuersozietät, Oberschlesische Provinzial-Feuersozietät, Land-Feuersozietät der Provinz Sachsen, Landschaftliche Brandkasse Hannover, Provinzial-Feuerversicherungsanstalt der Rheinprovinz.

According to the terms of constitution of the Union (which in 1932 included eight societies), other Prussian public institutions operating hail insurance may be admitted to membership by the general meeting of the Union, provided that they undertake this branch of insurance on the basis of the conditions of insurance and on the rates established by the Union, or that they are prepared to subscribe to the principles governing the Union. With the consent of the Union non-Prussian institutions may also be admitted, and in this case certain exceptions may be allowed in respect of regulations forming part of the constitution of the Union.

In carrying out the purposes for which it was formed the Union has the right to request the co-operation of the member societies. The object of the Union is to carry on and develop public hail insurance on a mutual basis, with provision for reinsurance either on its own account or through an intermediary. In those territorial areas in which the member societies do not carry on this branch of insurance, hail insurance may be undertaken directly by the Union, provided that the consent is obtained of the public insurance society concerned with the territory in question. The Union may, if considered advisable for its own purposes, take part in the activity of other undertakings. It has the right to supervise the activity of member societies in respect of the conformity of such activity with the rules of the Union and of its general advisability. Such supervision is carried out by experts and in particular by means of audits, specially arranged, dealing with the whole course of the business of the member societies.

The obligations of the Union are guaranteed by its own capital constituted in accordance with the terms of the scheme for working as laid down by the general meeting, with the approval of the Minister of Internal Affairs. The union undertakes: (*a*) to take up the insurances of its members for the purposes of adjusting the risks; (*b*) to credit to its members the compensation payments made as well as the expenses of settlement of claims; (*c*) to credit to the member societies the administrative costs relating to the operation of hail insurance in accordance with a scale of rates established by the general meeting; (*d*) to establish the conditions of insurance and the rates of premiums to be observed by the member societies. On their side the member societies are to: (*a*) transfer to the account of the Union all hail insurance for the purposes of adjustment of risks; (*b*) to transmit to the Union all statistical documents required; (*c*) for the purposes of payment of the claims and of administrative costs effected by the Union to collect the annual premiums and additional payments required in accordance, with the scheme of working and to pay into the Union the sums so collected; (*d*) to take no measures in respect of the operation of hail insurance except with consent of the Union.

The surpluses on the years' working, if not assigned by the scheme to the technical reserves, are distributed to the member societies in proportion to their contributions of the three last years. Member societies are expected, after meeting

all obligations connected with hail insurance, to devote the surpluses thus distributed exclusively to benevolent or to public utility objects.

Supervision of the Union is exercised by the Minister for Internal Affairs of Prussia and extends over the whole of the activity of the Union. The supervising authority has the right to take all measures necessary for bringing the activity of the Union into accordance with the law, the terms of constitution and all provisions enacted on the basis of these. In this latter are enumerated all the principal measures that can be taken by the supervising authority. The Union is administered by the Administrative Council, the Executive Committee and the general meeting. All the rights and duties of these bodies are set out in the terms of constitution of the Union.

In the event of dissolution of the Union, the capital remaining after meeting all the obligations, and with the consent of the Minister of Internal Affairs, is distributed among the members in proportion to the contributions of the last five years (1).

It was open to the public fire insurance societies, which in 1925 undertook hail insurance as a subsidiary branch, to establish connection with the Bavarian Hail Insurance Institute, but they decided against doing so, mainly because this Institute made no provision for reinsurance, whereas the societies in question endeavour by this means to avoid the accumulation of losses experienced in the course of unfavourable seasons. These societies operate partly on the system of fixed premiums, partly on that of initial and supplementary payments (2).

The results of the season 1932 may now be given in respect of the six Prussian fire insurance societies which founded the Union, as previously enumerated.

The figures relating to the other two public societies (*Feuersozietät der Grenzmark, Danziger Feuersozietät*) which later formed part of the Union are insignificant and are therefore omitted.

In 1932 a total of 51,609 insurances were held with the Union with total insured risks of 276,431,375 Rm. and basic premiums amounting to 2,398,989 Rm. Of these 2,227 insurances only had been arranged on the system of fixed premiums with total risks of 14,959,055 Rm. and 104,776 Rm. in premiums. As compared with 1931 the insurances had increased by 2,179, the insured capital by 16,048,067 Rm., and the premiums by 27,001 Rm.

Compensation payments were made in 1932 by the Union to an amount of 1,968,189 Rm. on 4,648 claims, not including claims in suspense. In 1931 there were 7,600 claims and a total of payments of 5,000,000 Rm.

The majority of the Union's insurances are covered by reinsurance in return for additional payments (*Nachschussrückversicherung*). Only 1,308 insurances for a total sum of about 6,000 Rm. remain not covered by this reinsurance. Hence the large majority of the insurances contracted by the Union are in reality insurances effected on the basis of fixed premiums, although they are called insurances with variable premiums and with reinsurance effected in return for additional payments.

(1) Deutscher Reichsanzeiger und Preussischer Staatsanzeiger, 1 March Berlin 1928.
(2) Vortrag von Rohrbeck (already quoted) p. 4.

* * *

Some reference may now be made to the *Braunschweigische öffentliche Mobiliarversicherungsanstalt* which also undertakes hail insurance but is not a member society of the Union.

This Institute which has undertaken this branch of insurance since 1925 only concluded in the course of 1932 insurances to the number of 2,183 with a total insured risk of 14,523,925 Rm., and premiums collected to a total of 108,947 Rm. Compensation payments amounted to 3,574 Rm., or 3.3 per cent. of the receipts only. The figures relating to 1931 were as follows: 1880 insurances with a total insured capital of 13,218,630 Rm. and premiums amounting to 100,026 Rm. Compensation payments amounted to 20,672 Rm. This institution operates on the basis of fixed premiums carrying no obligation to make additional payments The figures indicated are explained by the fact that Brunswick is an area little affected by hail, and also that the Institute does not effect insurances in regions where the hail risk is more severe. Premiums collected from 1925 onwards amounted to 404,824 Rm., and compensation payments to 71,660 Rm. only, or 17.5 per cent. of the receipts (1).

* * *

There is in Germany still another form of organisation of hail insurance based on a contract of co-operation between the public authorities and the private insurance business.

In Württemberg there has existed since 1909 a contractual relation between the State and the *Norddeutsche Hagelversicherungsgesellschaft a. G.* at Berlin; and in accordance with this convention the State undertakes to make additional payments on behalf of in place of all persons living in Württemberg who are insured in this institution. The *Norddeutsche* on its side collects from its Württemberg members, in favour of the State in question, a supplement over and above the net premium which during the years 1928 and 1929 amounted to 65 per cent. in each year. These supplements are paid into a hail insurance fund set aside for the purpose of making the additional payments. In the event of the basic payments and the fund in question not being sufficient to meet the full compensation payments, the State undertakes to pay further amounts. In the course of 1928 the State was obliged to pay to the *Norddeutsche*, after deduction of the additional payment of 65 per cent., the sum of 917,609 Rm. and in 1929 up to 3,000,000 Rm. The number of insured persons in 1929 was 86,479 and the total risks insured were nearly 122,000,000 Rm. No reinsurance exists whether in favour of the insured persons or in that of the State. It has proved possible to maintain this system, although Württemberg is an area of severe hailstorms.

In Baden there is also a contractual relation between the State and the *Norddeutsche* negotiated in 1925 and renewed in 1927. In accordance with this agreement the insured person is not obliged to pay as re-insurance premium more than 66 per cent. of the basic premium, while the State undertakes the payment

(1) *Die Versicherung* already quoted of 8 December 1932.

of the remainder of the reinsurance premium. During 1929 this premium amounted to 135 per cent. of the basic premium; and in consequence the State paid towards reinsurance 69 per cent. of the basic premium of its insured farming population. Insured risks amounted in the course of 1928 to about 55,000,000 Rm. and in 1929 to about 60,000,000 Rm. Taking into account the severe hail risks in this area the method of regulating hail insurance may be considered to be very satisfactory (1).

In Hesse in 1903 a 15 year contract had been negotiated between the State and the *Norddeutsche*, in virtue of which the State was to intervene with the means supplied by a State hail insurance fund in favour of any insured persons belonging to Hesse so as to meet the undertakings made by these in respect of additional payments. This contract was however formally rescinded in 1912 before its expiry, as it proved too costly for the State of Hesse (2).

F. ARCOLEO.

BIBLIOGRAPHY ON ECONOMIC AND SOCIAL QUESTIONS

TORREJÓN Y BONETA, A. *Economia y valoracion agricola, forestal y urbana*, 264 p., published by " Agro Español ", calle Sagasta, 16, bajo, Madrid, 1934.

[The principal object of this excellent work, recently published by the well-known agricultural expert, D. Angel Torrejon y Boneta, is to assist not only specialists, but also all those who directly or indirectly are engaged in the sale and purchase of farm property, in all types of survey or valuation carried out in connection with agriculture, forestry or town property.

The author has omitted all theoretical explanation and has confined himself entirely to the practical side of the question. He most ably describes and analyses the various methods of valuation, using simple and scientific formulae and giving numerous practical examples and technical, statistical and economic information, extremely useful for the execution of all assessment work.

The book is divided into two parts. The first contains the following sections: – Fundamental principles and presuppositions of economics – Preliminary studies and examinations for assessment – Delimitation and surveying of land – Practical instructions for carrying out topographical work – Land taxation in general – Special assessments of pastures, kitchen gardens and uncultivated land – Assessments of land planted with trees or shrubs and also of nurseries – Forestry assessments – Assessments of standing crop – Water assessments – Assessment of buildings – Land improvement assessments – Assessments of dues and of real estate subject to taxes and charges – Estimation of estates in cases of eviction – Estimation of damages – Land credit – Estimation of rural and urban estates guaranteeing mortgage loans – Conditions and instructions of the Mortgage Bank for the granting of loans – Division of property, drawing up of inventories and balance sheets – Land tax and land register of rural wealth – Land registers of urban wealth – Land settlement and agrarian reform.

The second part is devoted to the study of the following subiects: – Arithmetic and Algebra – Mechanics – Natural grass land and sown grass land – Cultivation of trees and shrubs and the allied industries – Stock-breeding.

This second part is of extreme interest to the farmer, stock-breeder and also the assessor, as it contains much practical information on the crops and herds in various part of Spain described in detail according to the crops and agricultural districts.

An appendix gives the insurance rates in force in Spain for accidents in work, crop fires, etc.

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(1) WEISS: Probleme der Hagelversicherung. Sonderabdruck aus dem Assekuranz Jahrbuch. 1932, p. 43.

(2) MANES: Versicherungswesen II Bd., Leipzig and Berlin 1931, p. 146. Denkschrift des Staatsministeriums des Innern, quoted, p. 16.

The wide scope of the work which includes not only purely technical subjects but much closely allied legal and economic material, is sufficient proof of the full competence of the writer and of his three sons who collaborated in its production.

There is evidence of considerable preparatory work; the volume is attractively produced and contains a number of tables and lists of great practical utility. The exposition is clear and simple.

The book, published by the " Agro Español " ranks among the many thorough pieces of work produced by the Spanish technicians]. A. P.

INTERNATIONAL LABOUR OFFICE – Geneva 1934. «Statistics of wages of agricultural workers in various countries, 1927-1934 », p. 29.

[The statistical data which the International Labour Office has gathered from 27 different countries covering the wage scale of agricultural workers in most of Europe, the U. S. A., Canada, Mexico, Chile, China, India, Japan, Australia and New Zealand, must be accepted with caution as they are frankly declared by the Labour Office itself to be far from the precision reached in the compilation of data concerning the wage scale of industrial workers. Particularly in some cases it has been very difficult to get the information necessary to compile statistics covering a sufficiently long period to justify fairly definite conclusions relative to the trend of wages of the various categories of agricultural workers. In other cases however the Labour Office has been able to obtain the data covering the whole period under consideration, 1927-1934.

In a general way these statistics show that the wage scale of the agricultural labourer has been heavily affected by the world-wide crisis of these last five years. It is only in the first quarter of 1934 that one can notice signs of improvements as compared with conditions prevailing in the wage scale of farm workers since 1931-32

The data submitted by the Labour Office admit also of some comparison in the wage scale in some of the countries where reliable data have been obtained It does not appear however that the measures taken by the various governments in favour of agriculture during the period under consideration succeeded in influencing the trend of the wage scales This holds true both in the case of exporting and importing countries In the case of the former the contraction of exports caused a marked and steady reduction of wages; while the measures adopted in the latter to sustain prices (protective tarifs, quotas, etç), failed to benefit the agricultural wage earner. Even with all the reservations as to their completness and reliability which the Labour Office itself has made in the illustrative section of its study on agricultural wages, these data cannot fail to interest economists and students of agricultural questions at large as their collection and presentation are ' the first attempt to cover a field which has hitherto been little explored ']. V. F.

KARL WALTER: Co-operation in Changing Italy. The Horace Plunkett Foundation. London, P. S. King and Sons, Ltd., 1934, X-80 pp.

FREPPEL COTTA: Agricultural Co-operation in Fascist Italy. London, P. S King and Son, Ltd., 1935, XV-148 pp.

[The purpose of these two publications is to examine the situation and developments of co-operation under the Fascist regime. In both cases they represent the result of careful and valuable investigations carried out on the spot by the writers themselves, who have effected contact with the organisations and persons in Italy directly concerned with the cooperative movement.

Mr. Walter remarks that the place of co-op ration in the new economic structure of Italy is of outstanding importance, and he gives a careful account of the movement, dealing in turn with consumers' co-operation, co-operation for farm requirements and marketing, processing and marketing, engineering and land reclamation, transport, building and tenancy, credit, insurance etc.

In the course of a study of the Italian co-operative system in agriculture and its main results, Mr. Cotta, shows how the Italian Government is encouraging this form of economic organisation which has found a unique application in the agricultural labour and cultivation societies (*affittanze collettive*), to which a chapter of special interest is devoted. A detailed examination of the organisation and the evolution of the principal types of Italian agricultural co-operation is presented in a systematic form likely to be of great value to students of the subject. Both publications are provided with excellent bibliographies].

ASSEKURANZ-COMPASS. Internationales Jahrbuch für Versicherungswesen. 43 Jahrgang. 1935. Wien (p. XXXI-1320).

[This Year Book, founded in 1893 by Gustav J. WISCHNIOWSKY, has this year reached its 43rd edition. It consists in a collection of the data relating to the insurance societies of 30 countries of Europe, 7 countries of Africa, 12 of America, and 9 of Asia and Australia.

Like the previous volumes, this one contains information in regard to the composition of the administrative bodies, the members' capital, the branches of insurance operated by the different societies in question, and, for a number of societies, the balance sheets of 1932 and 1933.

The contents of the 1935 edition have been enlarged; last year's volume contained 1264 pages, while in the present volume there are 1320 pages.

It is hoped that it will shortly prove possible to publish once again for the principal countries the introduction which for the editions up to 1931 preceded the analytical data].

PUBLICATIONS RECEIVED BY THE LIBRARY

Books.

Sociology.

SOMMARIN, E. Befolkkningsfragan och jordbruket. Lund, Gleerup, [1935]. IV, 403 p. [Demography and agriculture].

Economic.

AN ECONOMIC REVIEW OF THE YEAR 1934 IN CZECHOSLOVAKIA. Prague, Petschek, 1935. 139 p.

BERNARD, P. Le problème économique indochinois. Paris, Nouvelles éditions latines, [1934]. LXII, 424 p.

Rural Economics.

THE AGRICULTURAL REGISTER 1934-5, being a record of legislation, organization, supplies and prices. Oxford, Agricultural Economics Research Institute. 1935 391 p.

Insurance.

ANNUAIRE DES SOCIÉTÉS D'ASSURANCES OPÉRANT EN FRANCE ET DES COMPAGNIES ÉTRANGÈRES. 1935. Paris, [Imprimerie Berger-Levrault] 1935. 1683 p.

Co-operation.

HÜTTER R. Die Steuerreform von 1934 und die landwirtschaftlichen Genossenschaften. 2. verbesserte Aufl. Neuwied a. Rh., Genossenschaftsdruckerei Raiffeisen, [1935]. 187 p.

Trade

COMMERCIO ESTERO E TURISMO. Annuario delle camere di commercio italiane all'estero. Anno 1935. Milano, A. Cordani, 1935, 1158 p.

NEELY, W. C. The agricultural fair. New York, Columbia university press, 1935, XII, 313 p.

TILGNER, D. J. Racjonalne opakowanie towarów Warszawa, [Nakladem « Informator eksportowy »], 1934. 192 p (Wydawnictwa Panstwowego Instytutu eksportowego. Tom 16).
[Scientific packing of merchandise].

Various.

SCHMECKEBIER, L.F. International organisations in which the United States participates. Washington. Brookings institution, 1935. X, 370 p. (Institute for government research. Studies in administration n. 30).

SOCIÉTÉ ANONYME DE L'ANNUAIRE GÉNÉRAL DE L'AFRIQUE DU NORD. Grand annuaire général de l'Algérie la Tunisie et du Maroc 1935. Alger, 1935.

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THE IMPORTANCE OF PIG BREEDING FOR THE PROFIT CAPACITY OF AGRICULTURE IN CERTAIN COUNTRIES OF EUROPE FROM 1927-28 TO 1931-32

I. — DENMARK, NETHERLANDS (OVERIJSSEL), SWITZERLAND, AUSTRIA, GERMANY.

In the present article it is proposed to investigate the development of pig breeding in certain European countries and the effect of the progress of this branch of farming on the returns from agriculture in these countries. The enquiry will be based essentially on the analysis of the farm accountancy results available for these countries. From study of the accountancy data relating to examples of different types of farms representative of the region to which they belong, taken together with other statistical and economic information available in regard to the countries in question, it becomes possible to distinguish certain tendencies which have appeared in the course of the period under review. While avoiding any rash generalisation, some valuable conclusions may none the less be often reached from such an examination of the material.

In any study of the development of the pig breeding which forms an integral element in certain groups of farms in a large number of European countries, it is essential in the first place to distinguish certain leading trends in this development according to countries; and then to carry the enquiry a stage further by means of a comparative study of the position of this branch of farming according to regions and farming systems. Taking first a general view, which will enable us to distinguish certain general tendencies discovered on examination of the averages of the countries, tendencies giving an approximate and imperfect idea only of the phenomena studied, the next step will be to pass on to more exact observations of the various aspects of the details of this branch of farming.

It is clear that the study of pig breeding, which, in the very complex structure of European farming, is closely connected with all other branches, must include some consideration of the other branches agricultural of production.

The various phases in the development of pig breeding are simply the result of the rival claims, as between this branch of agriculture and the other branches, such as cattle breeding, dairying, arable cultivation, etc., for the use of the land, of the available labour and of the farmer's capital. These rival claims are decided by the farmer himself after weighing the relative advantages of these different methods of utilising his resources.

Some of the advantages which certain branches of farming have over others are due to permanent factors, such as climatic or agrogeologic conditions, while others depend on variable factors, such as prices, general economic conditions, etc. In consequence these advantages tend also to have either a relatively permanent or a variable character, and in certain circumstances, the influence of one or another group of factors on the position of a given branch of production may be weakened or even completely neutralised by the opposing influence of others. Thus — and this is precisely what is occurring at present in the majority of countries — the pursuit of a certain economic or commercial policy in regard to maintaining or raising the prices of agricultural products may result in the artificial creation of conditions in which the unremunerative situation of such branches of production, due to permanent factors, may be converted into an advantageous situation. This enquiry will show how the position of various branches of agriculture, and of pig breeding in the first instance, in the various countries, has been influenced by these acts of intervention in economic life, the object of which was to alter the situation in favour of one or another branch of farming which happened to be unremunerative.

An attempt will thus be made here to note and to analyse the effect on the different branches of farming and especially on pig breeding of the various measures taken by Governments for the protection and encouragement of farms and farming. In this way some idea may be gained of the reactions to these measures from the international standpoint, and the enquiry, based as it is on the objective data of farm accountancy, will show the influence of the agricultural or commercial policy of certain countries on the form assumed by, and the returns from, one or another branch of agricultural production in other countries. As these enquiries are pushed further, and as the accountancy results for the years from 1932-33 onwards become available, we shall be enabled to draw conclusions, valuable alike on the theoretical and the practical side, in regard to the results of planned economy developments in agriculture, and to the reactions noted in the international sphere to the different national programmes of farm relief. These reactions are partly discernible in the general statistics of the countries reviewed; but this study of accountancy results alone make it possible to establish with any degree of certainty their effects on the internal structure of farming on the return from the different branches and on the complex interplay of the relations between these branches.

With these general remarks, we may pass to the study of the variations in the earning capacity of agriculture in the countries under review for the period from 1927-28 to 1931-32 for which the accountancy data are available. This article will deal with Denmark, the Netherlands, Switzerland, Austria and Germany; a later study will be made of the development which has taken place over the same period in another group of countries, *viz.*, Norway, Sweden, Finland, Poland, Lithuania, Latvia and Estonia.

The accompanying tables indicate the changes that have occurred, from 1927 to 1931, in the net return of the agriculture in the five countries reviewed in the present article, as well as in the items of the gross return and of the farm expenses.

At the beginning of this period, the effects of the crisis and of measures of restriction and regulation were not yet in evidence, but from 1930-31 onwards the economic depression began to be increasingly felt, together with the effects of the regulation of production of and trade in agricultural products and of the progressive restriction of trade channels. In Austria, to judge from the examples for which accountancy data are available, the net return from agriculture fell in 1931-32 below zero. In Denmark and in Overijssel (Netherlands) the net return, after showing considerable increase in 1929-30, fell in 1931-32 even lower than in Austria, in Overijssel the decrease in the net return from 1929-1930 to 1931-32 has been actually more than 400 gold francs per hectare (643 francs per unit of area of 1.64 ha.). In Switzerland and in Germany on the other hand, conditions of production have remained comparatively stable. In Switzerland, the net return, after an increase in 1929-30, as compared with 1927-28, of more than 200 gold francs per unit of area of 1.6 ha. (or about 125 gold francs per ha.), reverted in 1931-32 to the level of 1927-28. In Germany, owing to the Government protective measures, the farmers were enabled to increase their return, and it was not till 1931-32 that the net return of German agriculture tended to revert to the 1927-28 level, without however falling below zero, as had been the case at the earlier date.

Taking the countries separately in fuller detail, in DENMARK the net return of the farms in 1928-29 was more than doubled in respect of the 1927-28 figure. This increase may be attributed mainly to the higher gross return from pig breeding, both prices and production having risen. Exports of bacon and pig meat increased by 6 per cent. only, exports of milk and milk products by 3 per cent., and egg exports fell by 6 per cent. (1). Denmark began to export beef, but at the same time cattle exports diminished so that the total Danish exports of cattle breeding products finally remained stationary.

A slight increase in the gross return from dairying, from cereal and root crop cultivation, and from other branches, is to be noted; prices and also production of milk and derivatives increased. In regard to cereals and root crops, yields were small in 1927-28; in the following year there was a brisk demand, so that much larger quantities of cereals were sold, and there was a large importation of potatoes, amounting to 180 per cent. more than in 1927. Prices and production of eggs slightly rose in 1928-29; the gross return from this branch diminished somewhat, the effect probably of a fall in the yield from poultry farming, as exports of eggs and egg products declined somewhat; this diminution was however comparatively unimportant. The gross return from pig fattening was very satisfactory; dairying had also been profitable, and the gross return was higher in 1928-29 than in any succeeding year, as compared with 1927. On the other hand, the farm expenses were at a somewhat lower level than in 1927-28; the labour costs were somewhat less heavy and the purchases of feeds, of so great an importance to Denmark, bulked rather less heavily in the farm expenses.

(1) According to the calculations made by the Farm Accountancy Bureau of the Institute.

TABLE I. — *Increase or Decrease in the Net Return, Gross Return*

Gold francs pe

	Net return	Gross Return: Pigs	Milk and milk products	Stock breeding (slaughter beasts etc.)	Cereals root crops	Other branches	Total
Denmark							
1927-28	100	577	691	263	114	116	1,761
1928-29	+ 243	+ 133	+ 33	— 15	+ 11	+ 9	+ 171
1929-30	+ 206	+ 138	— 3	— 7	— 43	+ 9	+ 94
1930-31	— 69	— 82	— 103	— 40	— 62	— 3	— 290
1931-32	— 121	— 231	— 266	— 124	— 65	— 32	— 718
Overijssel							
1927-28	— 73	— 253	— 78	+ 41	— 9	— 91	— 390
1929-30	+ 191	— 222	— 65	+ 161	+ 5	— 90	— 211
1930-31	— 3	— 380	— 173	[illegible]	— 27	— 94	— 576
1931-32	— 352	— 436	— 288	— 178	— 48	— 116	— 1,066
Switzerland:							
1927-28	+ 103	— 386	— 12	+ 174	+ 28	+ 432	+ 236
1928-29	+ 206	— 416	+ 76	+ 181	+ 39	+ 420	+ 300
1929-30	+ 318	— 379	+ 52	+ 226	+ 32	+ 442	+ 373
1930-31	+ 298	— 358	— 16	+ 316	+ 14	+ 328	+ 284
1931-32	+ 105	— 417	— 49	+ 203	+ 25	+ 398	+ 160
Austria:							
1927-28	+ 27	— 467	— 560	— 139	— 21	+ 47	— 1,140
1928-29	— 21	— 494	— 570	— 174	— 31	+ 29	— 1,240
1929-30	— 30	— 478	— 571	— 154	— 45	+ 20	— 1,228
1930-31	— 59	— 474	— 568	— 149	— 55	+ 12	— 1,234
1931-32	— 111	— 489	— 587	— 209	— 51	+ 9	— 1,327
Germany:							
1927-28	— 102	—	—	—	—	—	— 946
1928-29	— 41	— 493	— 540	— 152	+ 286	+ 104	— 795
1929-30	— 53	— 492	— 559	— 156	+ 282	+ 72	— 853
1930-31	— 73	— 515	— 567	— 165	+ 238	+ 61	— 948
1931-32	— 93	— 528	— 588	— 194	+ 191	+ 46	— 1,073

(1) The net return of Danish farms in 1927-28 is taken as basis of comparison, the absolute figure the first line of the table, form the basis of comparison, the figures for the other years and the other unit of area adopted here, *viz.*, the area (1.64 ha.) which corresponds to a net return of 100 francs in Denmark

and the Cost of Production from 1927-28 to 1931-32 (1)

unit of area

Farm Expenses						Interest on capital	Cost of production
Labour	Fertilisers	Seed and forage	Taxes	Other expenses	Total		
616	68	688	64	225	1,661	268	1 929
− 24	− 2	− 44	− 4	+ 2	− 72	− 2	− 74
− 25	+ 4	− 107	− 0	+ 25	− 112	− 5	− 117
− 46	+ 2	− 173	− 7	+ 3	− 221	− 4	− 225
190	− 25	− 291	− 20	− 65	− 597	− 54	− 651
− 104	+ 35	− 164	50	− 34	− 317	+ 21	− 296
108	+ 67	257	− 45	− 59	− 402	+ 72	330
− 113	+ 16	− 340	− 45	− 91	− 573	+ 76	− 497
− 166	− 15	− 365	− 44	− 104	− 714	± 0	714
+ 344	− 30	− 477	− 16	+ 312	+ 133	+ 317	+ 450
+ 307	− 34	− 463	− 18	+ 302	+ 94	+ 303	+ 397
+ 267	− 29	− 457	− 14	+ 288	+ 55	+ 295	+ 350
+ 245	− 34	462	− 21	+ 256	− 14	+ 313	+ 299
+ 221	− 34	− 443	− 19	+ 330	+ 55	+ 327	+ 382
302	− 58	− 646	− 45	− 116	− 1,167	− 124	− 1 291
− 347	− 57	− 649	− 46	− 120	− 1 219	− 133	− 1 352
− 342	− 57	− 653	43	− 103	− 1 198	− 128	− 1 327
340	− 57	− 648	− 42	− 88	− 1,175	− 120	− 1 295
372	− 60	− 640	− 45	− 99	− 1,216	− 130	− 1 346
− 235	+ 6	− 586	− 20	− 9	− 844	—	
− 203	+ 15	− 577	− 9	+ 20	− 754	—	−
− 217	+ 17	− 600	− 17	+ 17	− 800	—	—
− 236	+ 2	− 611	− 22	− 8	− 875	—	—
− 285	− 13	− 623	− 23	− 30	− 980	—	—

xpressing gross return, farm expenses, interest on capital and cost of production in Denmark for 1927-28, in ountries show the difference, positive or negative, in each case. All the figures refer to the conventional n 1927-28

TABLE II. — *Prices in Gold Francs of the Chief Agricultural Products* (*).

(Data supplied by the Accountancy Offices and the International Yearbook of Agricultural Statistics).

Designation	Cereals q.	Potatoes q.	Beet kg.	Pig meat kg.	Milk litre	Butter kg.	Cheese kg.
Denmark:							
1927-28	27.97	18.84	1) 0.69	2) 1.80	0.21	4.19	1.17
1928-29	25.54	16.04	1) 0.65	2) 1.97	0.22	4.35	1.16
1929-30	22.71	13.57	1) **0.93**	2) **2.23**	0.21	4.08	1.09
1930-31	16.19	11.47	1) 0.84	2) 1.35	0.15	3.11	0.90
1931-32	13.44	10.72	1) 0.47	2) 0.82	1.11	2.20	0.65
Overijssel (Netherlands):							
1927-28	23.41	15.02	3) 2.06	1) 1.37	—	4.33	2.21
1929-30	20.21	7.82	3) 2.19	1) 1.65	—	4.05	2.10
1930-31	14.40	10.43	3) 2.07	1) 1.02	—	3.26	1.72
1931-32	25.92	8.23	3) 1.59	1) 0.73	—	2.38	1.30
Switzerland:							
1927-28	42.38	14.34	1) 1.70	1) 2.22	0.24	4.81	2.50
1928-29	42.18	13.75	1) 1.68	1) 1.86	0.27	4.91	2.70
1929-30	42.26	14.48	1) **1.73**	1) 2.01	0.26	4.98	2.71
1930-31	41.85	14.12	1) **1.83**	1) **2.25**	0.24	4.75	2.44
1931-32	39.43	11.64	1) 1.77	1) 1.74	0.23	4.57	2.28
Austria:							
1927-28	30.17	17.12	1) 1.76	3) 2.16	0.27	3.90	—
1928-29	28.90	11.11	1) 1.53	3) 2.04	0.27	3.72	—
1929-30	25.04	10.28	1) **1.86**	3) **2.49**	0.26	3.77	—
1930-31	20.34	9.33	1) **1.87**	3) 2.12	0.26	3.32	—
1931-32	17.93	10.23	1) 1.68	3) 1.57	0.24	2.90	—
Germany:							
1927-28	31.40	4.55	1) 1.46	1) 1.47	0.23	4.50	2.94
1928-29	26.92	3.17	1) 1.41	1) 1.83	0.22	4.49	2.73
1929-30	30.95	5.27	1) 1.42	1) **1.91**	0.21	4.10	2.54
1930-31	32.41	4.04	1) 1.30	1) 1.36	0.22	3.46	2.36
1931-32	28.71	4.34	1) 0.92	1) 1.07	0.18	2.98	2.19

(*) The highest prices are shown in thick type in the table.
(1) Live weight. — (2) Bacon. — (3) Meat.

In 1929-30 the net return, which was still very high, began to fall. The farm expenses however continued to show a marked decline as compared with 1927-28. The harvests of 1928 had been very abundant, and thus Denmark was able to reduce imports of cereals (including maize) and of potatoes, as appears from the following figures where the 1927 imports are taken as equal to 100 (1):

Imports of cereals in 1929. 63
Imports of potatoes in 1929 37

(1) International Year-book of Agricultural Statistics. Rome.

TABLE III. — *Production per hectare from 1927-28 to 1931-32.*

Designation	Production per ha. (1)			Gross Return (in quantities) (2)					Gross Return as percentage of the production	
	Cereals	Pota-toes	Sugar beet	Cattle live weight	Milk	Pigs live weight	Cereals	Pota-toes	Cereals	Pota-toes
	q.	q.	q.	kg	kg.	kg.	q.	q.	%	%
Denmark:										
1927-28	9.10	1.92	4 —	107	1,557	131	1.51	0.81	17	42
1928-29	11.79	3.98	4.36	108	1,579	152	2 —	0.69	17	17
1929-30	11.79	3.64	3.09	80	1,609	142	1.28	0.61	11	17
1930-31	10.43	3.14	3.43	70	1,848	149	1.01	0.72	10	23
1931-32	9.98	2.83	2,54	47	1,778	128	1.01	0,85	10	30
Overijssel:										
1927-28	4.98	11.98	7.99	128	1,920	144	2.64	—	53	—
1929-30	6.78	20.19	8.95	166	2,120	231	5.04	—	74	—
1930-31	5.19	15.14	9,25	154	2,179	118	6.19	—	91	—
1931-32	4.78	13.59	4.45	10	2,304	118	2.91	—		
Switzerland:										
1927-28	3) 1.13	3) 3.25	0.21	146	1,727	52	1.36	2.38	—	73
1928-29	3) 1.10	3) 2.97	0.22	139	1,734	53	1.51	2.51	—	84
1929-30	3) 1.07	3) 3.62	0.20	152	1,745	60	1.50	2.19	—	60
1930-31	3) 0.93	3) 2.62	0.19	170	1,718	59	1.32	2.05	—	78
1931-32	3) 0.98	3) 3.33	0.18	135	1,704	56	1.56	2.83	—	85
Germany:										
1927-28	—	—	—	—	—	—	—	—	—	—
1928-29	8.57	14 —	3.75	33	436	38	6.87	5.61	80	40
1929-30	9.41	13.64	3.77	38	382	27	7.56	5.35	80	39
1930-31	7.58	16 —	5.06	35	343	28	7.04	3.50	93	22
1931-32	7.52	14.94	3.77	34	351	28	6.21	3.22	83	22
Austria:										
1927-28	2.56	4.22	1.06	35	295	46	1.80	0.48	70	11
1928-29	2.51	3.48	0.63	29	273	38	1.32	0.86	52	25
1929-30	2.47	4.07	1 —	29	281	36	1.25	0.62	50	15
1930-31	2.33	3.71	1.37	26	288	43	1.59	0.66	68	18
1931-32	1.97	3.69	1.33	14	264	51	1.30	0.60	66	16

(1) Figures based on the data of the International Yearbook of Agricultural Statistics and referring to the area used as basis for the transformation calculations of accountancy results, such area not being the same throughout, as certain Offices include in the area forests, waters, etc., while others exclude these. In consequence the figures are not precisely comparable from one country to another.

(2) Figures based on accountancy data, and referring also for each country to an area calculated according to the usage of the Offices, as already explained under (1). In the first three columns are shown the quantities harvested per hectare of the area as taken into consideration; in the five following columns are shown the quantities which are components in the gross return, *i. e.*, the quantities marketed or consumed by the farm household, excluding those transformed on the farm. This accounts for the varying difference shown.

(3) The area is estimated.

TABLE IV. — *Labour in man-days per ha. and wages in gold francs per man-day of a farm worker* (*).

Designation	Labour in man-days					Farm wages in gold francs per man-day				
	1927-28	1928-29	1929-30	1930-31	1931-32	1927-28	1928-29	1929-30	1930-31	1931-32
Denmark	(1) 45	(1) 45	(1) 43	(1) 43	(1) 42	8.39	8.23	8.29	8.14	6.09
Overijssel	60	—	60	60	58	5.20	—	5.18	5.11	4.74
Switzerland	75	73	70	67	71	7.81	7.72	7.70	7.85	7.20
Austria	64	70	69	76	64	2.98	2.35	2.42	2.57	2.41
Germany	—	—	—	—	—	—	—	—	—	—

(*) Accountancy data.

(1) Arithmetic mean given by the Office The average given in *Farm Accountancy Statistics* is a weighted average calculated by the Institute.

The gross return diminished by about 80 gold francs per unit of area since 1928-29. Apart from bacon and eggs. Danish exports increased in 1929, taking 1927 as 100 (1).

Danish Exports in 1929.

Cattle	103
Beef	214
Bacon and pigmeat	97
Milk and derivatives	111
Eggs	91

As the prices of pigs had gone up in 1928-29, the Danish farmers made purchases from abroad of ten times as many porkers as in the previous year. Prices of pigs and of pig meat however still rose and the gross return from pig breeding was slightly higher than in 1928. Dairying began to show the effects of the low prices of milk and derivatives; cattle breeding improved somewhat, owing to the rise in cattle prices. The fall in cereal and potato prices helped to aggravate the loss on dairying, and although the gross return from pig breeding showed no decline, the total gross return was, as already stated, 80 gold francs per unit of area (1.64 ha.) lower than in 1928-29.

In 1930-31 the volume of Danish exports of agricultural products was increased, taking 1927 as 100 (1):

Cattle	64
Beef	862
Bacon and ham	120
Milk and derivatives	118
Eggs and derivatives	102

(1) International Year-book of Agricultural Statistics. Rome.

Beef was more readily exported than cattle and there was a decreased production of cattle. Owing to the collapse in prices of agricultural products the gross return was less by 383 francs per unit of area than that of 1929, the gross return from pig breeding alone fell by 220 francs, and the gross return from dairying by 100 francs. Farm expenses were reduced by 108 francs only, labour was somewhat cheaper, maize prices had fallen considerably, and potato imports were reduced by 58 %. Generally the net return had declined by 275 francs as compared with that of 1929-30.

In 1931-32 Denmark began to give constantly increasing attention to sheep and poultry farming. Whereas in 1927-28, the production of beef was 107 kg. (live weight) per hectare, it was 47 kg. only in 1931-32, while at the same time milk and pig production slightly diminished after 1930-31, and the importation of porkers was reduced by one half. In 1931-32 the position of the export trade was as under, taking 1927 as 100 (1):

Cattle	47
Beef	1403
Bacon and pigmeat	147
Milk and derivatives	119
Eggs and derivatives	116

Since 1930 the collapse in prices has been very striking; the branch of production most affected was pig fattening; dairying less so, and other branches even less still. The crisis, however, had very grave effects; in 1931-32 the total gross return in 1931-32 showed a decline of 718 francs per unit of area (1.64 ha.) as compared with that in 1927, and of 429 francs as compared with the return in 1930-31. It was impossible to effect a similar reduction in farm expenses. Although the farm worker received 2 francs less per working day and although the price of maize fell sharply, the farm expenses did not show a decline corresponding to that of the gross return, and *the net return was negative* (2). It should be added that in 1931-32 there was a general fall in interest on capital.

In 1931-32 the prices of concentrated stock feeds and chemical fertilisers diminished respectively by 9 and 13 per cent., as compared with the same prices in 1930; on the other hand, the fall in the prices of building materials, farm equipment and machinery was quite inconsiderable. As already stated the fall in wages was more marked.

Among prices of the different agricultural products, the most serious fall was that in prices of live stock products, which reached a level below that of the pre-war period. The increase in the production of bacon, butter and eggs did not make up for the collapse in prices.

(1) International Year-book of Agricultural Statistics.

(2) *i. e.*, the farm expenses are higher than the gross return. In Table I, col. 1, this is understood whenever a figure is shown preceded by the minus sign (—) *and in absolute value* above 100 (= Denmark).

Market conditions for cattle were very similar to those of the market for pigs. The frontier was practically closed to imports in 1928 and wholly closed in the following year. Thus a rise in prices followed with a resumption of imports in 1930 without prejudicing the returns from cattle breeding. The two per cent. rise in the total gross return, which occurred as between 1927-1928 and 1930-31 in spite of the fall in prices of milk and of crop products, was due to the cattle breeding and pig fattening.

In 1931-32 pig prices reverted to their 1928-29 level and the gross return of this branch decreased in accord with the prices. Beef production declined in 1931-32; there was a slight fall in prices and the gross return from cattle breeding also fell almost to the level of 1928-29. Milk prices had never reached so low a level since 1927-28 as in this year; on the other hand milk production was maintained and the gross return showed a slight decline only. Farm expenses in 1931-32 increased by 69 francs per unit of area; the increase being in the item of current expenses which are very high in Switzerland owing to the cost of living.

After following an upward curve from 1927-28 to 1929-30 the profit capacity of Swiss agriculture then fell again and in 1931-32 reached its original starting point of 1927-28. In Switzerland in 1931-32 there was as yet no marked evidence of the crisis, or at least it had not attained the degree of severity already experienced in other countries although its proximity was clearly felt. National production of slaughter cattle and of pigs was seriously hampered in 1931-32 by the importation of cheap preserved meats on a large scale. The export trade in dairy products showed a marked set-back, while the imports of butter and cheese were increased.

In AUSTRIA the net return fell by about 50 francs per unit of area between 1927-28 and 1928-29, because the gross return diminished by 100 francs whereas the farm expenses declined by 50 francs only. This position remained unchanged until 1931-32 in which year the net return became *negative*.

Austria which imported 774,000 quintals of dairy products in 1927, ceased to import in 1929, and in 1930 became itself an exporter of dairy products. The production of pigmeat, of which Austria is an importer on a large scale, was maintained, but the gross return from this branch is very sensitive to price variations.

There was continuous restriction in cattle imports, and while prices hardened there was a marked decline in production.

In 1928 there was a glut in the importation of Polish pigs on the Vienna market. The result was a fall in prices which was reflected in the prices of slaughter cattle and proved a serious menace to the stock breeding industry. An agreement was however made with Poland with regard to quota fixing and a temporary improvement resulted on the pig market which gave a certain fillip to the national pig breeding industry.

The dairying industry, protected as it was by tariffs, showed comparatively steady returns. The town dues on milk were abolished, as prices of manufacturing, or industrial milk do not affect fluid milk prices. Since the price of butter depends essentially on the prices of butter on the world market, an effort

has been made to protect the national milk production by the establishment of an Equalisation Fund.

The gross returns from crops are those which have least varied since 1927-28. Agricultural production in Austria is of a very varied nature: the Eastern plains and the banks of the Danube are mainly under arable cultivation, and are suitable for cereal growing and for root crops. Vine growing is successfully carried out where the soils are suitable. Fruit growing is well developed on the plainlands at the base of the Alps, and in the valleys of the Alps which are favourably situated.

The outlook for pig breeding continues to be favourable seeing that good supplies of feed from potato cultivation and dairy residues are available.

In 1931-32 cattle production received a marked set-back causing a decline in the gross return. Taking this together with the less serious declines occurring in the gross returns from pig breeding and from dairying, a decline of 93 francs per unit of area is found in the total gross return as compared with 1930-31. Farm expenses fell by 40 francs only, and as the margin between the farm expenses and the gross return was already small in 1930-31, this fall made the net return of 1931-32 *negative*.

In discussing GERMANY as a whole, account must always be taken of the limitations imposed on any general conclusions by the size of the country and the great diversity of its agriculture. Only by studying the different regions of Germany can a judgment be formed of the trends of the development which is taking place in the structure of German farming and in its production. Moreover in comparing the relative advantages of the different branches of farming in Germany with those of other countries, it is essential to have recourse not to the general averages, but to the data of the separate regions, contained in the accountancy material. The limitations indicated apply in one degree or another to all countries, but in the case of a large country with a highly diversified agriculture a special importance attaches to their observance. Accordingly it is with this reserve that any examination is here undertaken of the figures for Germany.

The net return from German agriculture was in 1927-28 *negative*, but in 1928-29 it increased considerably. Since then, the Government has taken strong remedial measures to counteract the depression, and although the net return from 1928-29 to 1931-32 has shown a constant diminution, in 1931-32 it remained positive. The gross return from live stock production declined from year to year in correspondence with the steady fall in prices, which was general except for the rise in pig prices in 1929, a rise accompanied by a slight increase in the gross return from this branch of live stock production. In 1931-32 the total gross return was lower than in 1927-28, but the net return was higher owing to a decline in farm expenses, due in part to the fall in the cost of labour which fell steadily from 1927-28 to 1931-32.

The observations made here in respect of Germany are of a general character only. Later when the general investigation is concluded, the detailed enquiry will be undertaken for Germany on the development of pig breeding according to regions and farming systems.

JOSEPH DESLARZES.

STUDIES ON THE INTERNATIONAL MARKET FOR AGRICULTURAL PRODUCTS

II. — Costs and Prices: Some Factors of the Evolution of Mechanical Power in Farming.

I.

The purpose of this article is to investigate how far the relation between prices of the sources of power utilised in agriculture, *viz.*, coal, petrol or motor spirit, electric current, etc., on the one hand, and on the other prices of agricultural products, has influenced the use of mechanical power in agriculture.

Certain limitations are however imposed on any treatment of the subject from the international standpoint, since there are remarkably few statistics obtainable on the employment of power machinery in agriculture, and especially few relating to long periods. The majority of the countries neither possess nor publish farm returns including utilisation of power machinery in agriculture, while for a certain number of countries only one census of the kind has been taken in recent years, or only a part of the machines so employed have been included in the census.

It is for this reason that this article is confined to the position in four countries only, *viz.*, Great Britain, Germany, the United States of America and Italy. From the statistics, however, available for these four countries valuable information may be obtained as to the development of the use of power machinery in agriculture.

Moreover the price relations as calculated reflect the situation of the growers in regard to the most important sources of power, fuels, etc., in the period under review from 1924 to 1933.

II. — Great Britain.

The development of the utilisation of machines in agriculture in England and Wales from 1925 to 1931, the two years for which corresponding data are available, appears to be as follows:

Number of Agricultural Engines returned as used on farms in England and Wales.

	1925	1931
Steam engines	3,731	2,246
Oil and petrol engines	56,744	65,725
Electric motors	700	2,475
Motor tractors:		
(*a*) for field operations	14,565	16,188
(*b*) for stationary work	2,116	2,465

From this table it will be seen that in the course of these six years the number of steam engines was reduced by 1,485, or by 40 per cent.; on the other hand the number of oil and petrol engines increased by 8,981 or by 16 per cent., of electric motors by 1.775 or by 250 per cent., while the number of motor tractors increased by 1,983 or 12 per cent.

The largest increase is that in electric motors, showing that in England and Wales the electrification of rural areas had made great progress. This especially marked increase in electric power producers as compared with other sources of power in England and Wales is mainly due to the following reasons: firstly the electric motors are very easy to work; secondly, the supply of the electric current may be practically considered as ensured as soon as the installation is made and there is no need as with steam or fuel engines for a constantly renewed supply of the sources of power, coal, petrol, etc., and thirdly, the fact that electric motors can be obtained in every range of size and that relatively very small engines give an economic outturn of work.

Naturally a farm worked by electricity depends on the supply of current, but at the present time the farmer can, as a general rule, count on an uninterrupted supply since, owing to the linking of many generating power stations on a single system, if there is a failure anywhere, current can be supplied from another station within a few minutes.

Another very important source of power in farming and the oldest of those here discussed is the horse. Actually over the period in which there has been noted an increase in the mechanical sources of power, the number of horses fell from 1,529,000 in 1924 to 1,447,000 in 1925, later to 1,194,000 in 1931 and to 1,154,000 in 1933.

The total reduction over the period is thus one of 375,000, or 25 per cent.; the figures however are those of all horses in the country, including those used in towns, and not merely those of farm horses. In the towns the rival of the horse is now especially the motor van or lorry, and no longer the motor car.

The number of motor vans or lorries in Great Britain has shown the following development.

Number of Motor Vans and Lorries in Great Britain.

(Census taken on 30 November)

Years	Number	Years	Number
1924	210,000	1929	325,000
1925	232,000	1930	341,000
1926	257,000	1931	352,000
1927	283,000	1932	360,000
1928	301,000		

This total of motor vehicles in Great Britain has thus increased by 150,000 from 1924 to 1932, or by 71 per cent.

Apart from the technical advantages offered by the use of the motor vehicle for transport of goods purely economic reasons have had weight.

It is unfortunately not possible to calculate the economic advantages and disadvantages with any precision, since the upkeep costs, whether of horses or of motor vans, vary greatly from stable to stable and garage to garage. To obtain some idea of the economic aspect of these changes in the general situation, it should be regarded from the agricultural standpoint. For this purpose there may be taken the price relations of wheat and butter on the one hand, as the most representative agricultural products, and on the other hand, those of coal and motor spirit.

As the tables show the position of the agricultural producer in Great Britain has deteriorated in respect of these sources of power in the years under review. Whereas in 1924 for the purchase of one ton of coal (South Wales Steam ordinary) 2.23 cwt. of wheat had to be sold, this proportion had increased in 1932 to 3.09 cwt. of wheat for one ton of coal. In 1924 for the purchase of one gallon motor spirit about 0.13 cwt. of wheat was required, but in 1932 as much as 0.25 cwt. was needed. A similar course is followed by the relations between butter prices and the sources of power mentioned: 1924 for one ton of coal, 0.12 cwt. of butter, and 0.15 in 1932, also in 1924 for 100 gallons of motor spirit 0.7 cwt. of butter, and in 1932 as much as 1.2 cwt.

No prices of electric current are available for Great Britain, and in consequence no comparison can be established between these prices, and those of farm products.

Exchange Value of Wheat (1) *in Great Britain.*

Years	Number of cwt of wheat required to purchase	
	one ton coal	100 gallons motor spirit No 1
1924	2.23	0.13
1925	1.89	0.12
1926	—	0.12
1927	1.71	0.11
1928	1.74	0.13
1929	1.86	0.16
1930	2.28	0.19
1931	3.18	0.23
1932	3.09	0.25

For Scotland the statistics are also available for the utilisation of machines in agriculture.

(1) English wheat.

Exchange Value of Butter in Great Britain (1).

Years	Number of cwt. of butter required to purchase: one ton coal	one 100 gallons motor spirit No. 1.
1924	0.12	0.7
1925	0.11	0.7
1926	—	0.8
1927	0.11	0.7
1928	0.09	0.7
1929	1.10	0.8
1930	0.12	1.0
1931	0.14	1.0
1932	0.15	1.2

Employment of Power Machinery in Agriculture in Scotland.

	1925	1931
Steam engines	401	207
Oil and petrol engines	11.137	14.880
Electric motors	187	421
Motor tractors:		
(*a*) for field operations	1.400	1.782
(*b*) for stationary work	291	670

In Scotland the number of engines worked by steam has nearly halved, while in England and Wales the reduction was by about one third only. On the other hand the increase in the number of the electric motors has not been so great as in England and Wales; it has doubled only, whereas in England and Wales the number trebled during the period under review. The number of motor tractors for field operations shows a development somewhat similar to that in England and Wales; on the other hand in Scotland the number of motor tractors for stationary work has more than doubled, while in England and Wales the increase in this group is about 20 per cent.

III. — Germany.

In Germany the use of mechanical power of farming is somewhat less uniform than, for example, in Great Britain. Here the three main groups of sources of power have developed from 1925 to 1933 as follows.

(1) Danish butter in London as the leading commodity.

Utilisation of Power Machinery in Agriculture.

	1925	1933
Steam engines	17,410	15,564
Electric motors	745,553	1,169,841
Light and heavy oil engines (internal combustion engines)	42,174	73,380

In the utilisation of power machinery in Germany there is no specially well marked change to be observed in any group, but the slight decline in number of steam engines is of interest and goes to show that in German farming the preference given to electric motors and internal combustion engines does not at the same time take the form of so marked a reduction in the number of steam engines as occurs in other countries.

The development in the employment of tractors in German farming is also of interest. Statistics enable a comparison to be made from 1929 only.

Utilisation of Tractors in German Agriculture 1929-1934 (1).

Years	Number	Years	Number
1929	14,411	1932	16,032
1930	15,146	1933	16,695 (2)
1931	15,859	1934	17,192

The increase in the number of tractors is relatively insignificant as between 1929 and 1934, being not more than 2,781 in all, or 19 per cent. If the comparison were established instead with 1925 the result might be different, but statistical data for that year is not available.

As may be seen from the preceding table, the number of light and heavy oil engines has almost doubled as between 1925 and 1933, the increase being 31, 206, the number of electric motors by 424,288, or 57 per cent., while the number of steam engines has declined by 1,876 or approximately 11 per cent.

Taking the evolution of prices of fuel from 1924 to 1933, it will be seen that the most marked fall was in prices of coal, *viz.*, from 3 Rm. for a quintal of coal in 1924 to 1.70 Rm. in 1933, or a fall of more than 40 per cent. On the other hand in 1924 the cost of 100 litres of motor spirit was 28.69 Rm. and in 1933 was 28.19 Rm., or a fall of about 1,7 per cent. Of importance in this connection for agriculture are the prices of potato spirit, which may be usefully employed in mixture with petroleum for light oil (*i. e.*, petrol) motors, and which is much in use especially

(1) Statistisches Jahrbuch des Deutschen Reiches. The figures do not agree with those of the farm census, owing to the distinction there made between tractors and motor ploughs.

(2) Actually in use.

in the East of Germany. Potato spirit cost in 1924 per hl. of alcohol 55.20 Rm. and 48.30 Rm. in 1933, a price fall of about 12 per cent. Gas oil for heavy oil motors in 1924 cost 10.90 Rm., and 9.89 Rm. in 1933 per 100 kg., and was thus cheaper by about 10 per cent. It has not been possible to ascertain the prices for industrial electric current in Germany.

The course of the prices of the leading agricultural products on the other hand has been as follows: wheat rose from 18.96 Rm. per quintal in 1924 to 19.18 Rm. in 1933, or a rise of about 1 per cent.; rye in 1924 cost 17.18 Rm. per quintal, and only 15.73 Rm. in 1933, or a fall of about 8 per cent. The price decline is very sharp in the case of butter which may be regarded as the most important of the live stock products, and the price of which reflects to a certain degree the price movement of milk. In 1924 first quality butter cost 350.89, Rm. per quintal, in 1933 only 217. 78 Rm., a fall of 133.11 Rm. per quintal or about 40 per cent.

Thus while the prices of wheat and rye have changed but little, there has been a considerable fall in the price of butter. If at the same time, we note the price movement of the fuels, petrol, potato spirit and gas oil, a slight decline in price is observed similar to that noted in the two cereals, while the price reduction of pit coal closely approximates to that of butter.

The effect of these conditions on the exchange value of wheat, rye and butter in respect of these sources of power in the years 1924 to 1933 is shown from the accompanying tables.

Exchange Value of Wheat in Germany.

Year	Number of quintals of wheat required to purchase: 1 ton of coal	100 kg. of imported gas oil, with preferential treatment at Hamburg	Potato spirit free on rail per 1 hl. alcohol content
1924	1.58	0.57	2.91
1925	0.86	0.51	1.91
1926	0.80	0.45	1.92
1927	0.69	0.42	1.98
1928	0.83	0.39	2.56
1929	0.89	0.40	2.68
1930	0.78	0.42	2.42
1931	0.71	0.43	2.05
1932	0.73	0.41	2.12
1933	0.89	0.52	2.52

The German wheat grower in 1924 had to sell 1.58 quintals of wheat to purchase one ton of coal, in 1933 on the other hand only 0.89 quintals. With rye in 1924 the relation was 1.75 quintals for one ton of coal, in 1933 only 1.08.

Exchange Value of Rye in Germany.

Years	Number of quintals of rye required to purchase: 1 ton coal	100 kg of imported gas oil with preferential treatment at Hamburg	Potato spirit free on rail per 1 hl alcohol content
1924	1.75	0.64	3.21
1925	1.00	0.59	2.23
1926	1.11	0.62	2.67
1927	0.74	0 46	2.12
1928	0.81	0.39	2.51
1929	1.03	0.44	3.09
1930	1.25	0.64	3.89
1931	0.95	0.58	2.73
1932	0.90	0 51	2.62
1933	1.08	0.63	3.07

In the case of butter, owing to the price decline being nearly similar, there was little change in the relation, in 1924 for one ton of coal 8 6 kg of butter and 7 8 kg in 1933

Exchange Value of Butter in Germany.

Year	Number of kg of butter required to purchase: 1 ton coal	100 kg of imported gas oil with preferential treatment at Hamburg	Potato spirit free on rail per 1 hl alcohol content
1924	8.6	3.10	15.73
1925	5.6	3.30	12.36
1926	6.5	3.65	15.73
1927	5.5	3.36	15.63
1928	5.6	2.65	17.28
1929	6.1	2.78	18.32
1930	7.3	2.93	22.74
1931	7.3	4.44	20.97
1932	7.6	4.28	22.13
1933	7.8	4.53	22.15

On the other hand the price relations of wheat and rye as compared with gas oil and potato spirit have not developed so favourably, although in the course of the ten years the situation was better than in either of the limiting years, 1924

and 1933. In the case of butter the situation, although improved during the intermediary years, was decidedly worse in 1933 as compared with 1924: for 100 kg. gas oil 3.10 kg. butter was required in 1924, and 4.53 kg. in 1933; for 1 hl. alcohol in potato spirit 15.73 kg. butter was required in 1924 and 22.15 kg. in 1933.

In connection with the advance in the use of power machinery in agriculture, but especially with the increase in the number of motor vehicles for transport of goods throughout Germany, the number of horses has diminished.

Number of Horses in Germany 1924 to 1933 (in thousands).

Years	Number	Years	Number
1924	3,855	1929	3,617
1925	3,917	1930	3,522
1926	3,973	1931	3,451
1927	3,810	1932	3,395
1928	3,718	1933	3,397

The decline in the number of horses in Germany in these ten years amounted to about 458,000, or about 12 per cent., while the increase in numbers of motor vans or lorries in circulation may be shown as follows:

Number of Motor Vans in Germany including electric vans on 1 July of each year.

Years	Number	Years	Number
1924	60,269	1929	143,952
1925	80,363	1930	157,438
1926	90,029	1931	161,072
1927	100,969	1932	152,420
1928	121,765	1933	155,219 (1)
		1934	191,715

This development was largely due to the fact that this type of motor vehicle had undergone in the period under review considerable technical improvements and was more reliable and cheaper. Since in Germany the most effective competitor of the horse is the motor van and not to so great a degree the farm tractor the field of competition is mainly the town and not the open country. The reduction of the number of horses in the towns however has a certain effect on the horse-breeding on the land, as fewer purchases of horses are made in the towns. With the motor van is also found the street-tractor, the number of which have increased in Germany as follows.

(1) Actually in use.

Tractors (for non-agricultural purposes).

Years	Number	Years	Number
1929	10,684	1932	10,126
1930	10,756	1933	10,884 (1)
1931	10,827	1934	14,778

From 1929 to 1933 there seems to be a stagnation in the number of tractors "for non-agricultural purposes," with a recent considerable increase from 1933 to 1934.

On the whole the use of power machinery in agriculture in Germany has greatly developed in the period under review, and moreover the price relation of the principal agricultural products to the most important sources of power has developed to some extent favourably for the farmer.

IV. — United States of America.

There is little statistical information available as regards the utilisation of power machinery in the agriculture of the United States of America, and in respect of the electric motors in use the only figure is that of 386,000 for the year 1930.

An article of S. H. McCrory, Bureau of Agricultural Engineering (Year Book of Agriculture 1932) merely states that the number of farms working on electricity had been nearly quadrupled between 1923 and 1930. According to the writer the development of electrification in California was especially marked, and in 1930 from 60 to 80 per cent. of all farms were equipped with electric installations. Electrification began in California in 1899, and by 1910 electric installations were used in preference to gasoline engines, especially for the working of irrigation plant. In the other States electrification made much slower progress, since current could not be delivered from the generating centres at a price acceptable to the farmer.

Passing on to the development of the utilisation of the other sources of power in the agriculture of the United States, the following statement may be made:

Power Machinery in United States Agriculture (apart from electric motors).

	1920	1930
Steam engines	70,000	25,000
Motor cars	1,980,000	4,135,000
Motor-vans or lorries	139,000	900,000
Tractors	246,000	920,000
Stationary gas engines	1,000,000	1,131,000

(1) In use.

In the ten years from 1920 to 1930 the number of motor cars used on farms in the United States has practically doubled, that of motor lorries has been multiplied by five, and that of tractors by four, while there is a considerable increase to be noted in the stationary gas engines, and the number of steam engines has diminished to one-third.

In this connection it will be of interest to examine the prices for coal, gasoline (the light oil known as petrol or motor spirit in England), and electric current.

Prices of Coal, Gasoline, and Electric Current in the United States of America

1924 to 1933 (in cents, wholesale prices).

Years	Coal (1) short ton	Gasoline (2) gallon	Electric Current 100 kwh.
1924	421	12.2	—
1925	411	13.3	—
1926	431	12.8	-
1927	426	9.2	—
1928	403	9.9	141
1929	395	9.1	138
1930	991	7.3	143
1931	374	5.0	145
1932	364	5.7	153
1933	367	5.1	138

According to the above from 1924 to 1927 the price of coal rose somewhat, while on the other hand the price of gasoline fell from 12.2 to 9.2, or about 25 per cent. From 1928 the prices for coal, gasoline and electric current are comparable.

From 1928 to 1933 the price of coal fell from 4.03 cents per net ton to 3.67 cents per ton, or by about 10 per cent., the price of gasoline from 9.9 cents per gallon to 5.1 or about 50 per cent., while the price for electric current fell from 141 cents to 138 cents per kwh. only, or by about 2 per cent. In the previous year, especially in 1932, the price of electric current stood higher than in 1928.

In connection with the course of these prices for coal, gasoline and electric current respectively attention may be drawn to the changes in the utilisation of these sources of power in the United States of America.

(1) Bituminous coal, mine run.
(2) Gasoline refinery, Pennsylvania.

Consumption of Coal and of Raw and Refined Petroleum, and Production of Electricity in the United States of America 1924-1935.

Years	Coal (1) million short tons (2000 lb.)	Petroleum (2) million barrels	Electricity million kwh.
1924	(3) 519.0	688	59,014
1925	—	727	65,870
1926	—	781	73,791
1927	499.8	802	80,205
1928	—	860	87,850
1929	519.6	940	97,352
1930	455.0	926	95,936
1931	371.9	903	91,729
1932	300.9	835	83,153
1933	315.9	865	85,402

The decline in the consumption in coal over the period 1923 to 1933 was very marked, being from 519,000,000 to 316,000,000 net tons, *i. e.*, 203,000,000 tons or about 40 per cent., a phenomenon accompanied by the price decline of about 10 per cent. already indicated. On the other hand the consumption of petroleum (raw and refined) in the United States of America was much increased during the ten years from 688,000,000 to 865,000,000 barrels or about 25 per cent. The price of gasoline fell in the same time from 12.2 to 5.1 cents per gallon, *i. e.*, by nearly 60 per cent.

The production of electric current also rose considerably in this period, from about 59,000,000,000 kwh. in 1924 to 85,000,000,000 kwh. in 1933. If note be taken of the course of the prices of electric current and its production in the years 1931 to 1933, it is of interest to see that the price rise from 145 to 153 cents per 100 kwh. as between 1931 and 1932 corresponds with a decline in production of current from about 91,729,000,000 kwh. in 1931 to about 83,153,000,000 kwh. in 1932, and that the price decline from 153 cents in 1932 to 138 cents in 1933 per 100 kwh. corresponds to a renewed increase in production of current from about 83,153,000,000 kwh. to 85,402,000,000 kwh.

The same movement may be observed in these years with gasoline prices and the consumption in raw and refined petroleum. The price fall of the gasoline on the one hand and the increased consumption of raw and refined petroleum on the other is very marked.

Production of electric current in the United States greatly increased although prices altered very little; this is in the first instance due to the progress in the erection of electric generating and distributing centres, which always bring in new consumers, since as already noted, the simplicity of the application

(1) Bituminous coal.

(2) Petroleum raw and refined, domestic demand.

(3) 1923.

to electric plant of all kinds of this source of power confers on it a decided advantage as compared with its competitors.

The prices of the more important agricultural products over this period in the United States will now be set out, *i. e.*, the course of the purchasing power of farmer consumers as compared with the main sources of power indicated from 1924 to 1933.

This comparison will be confined to two chief agricultural products, wheat and butter, wheat as an important cereal and butter as an important live stock product.

Prices for Wheat and Butter in the United States of America, 1924-1933.

Years	Wheat No 2 Red Winter, Chicago cents per bushel	Butter Creamery extra Chicago cents per pound
1924	128	—
1925	177	44
1926	157	43
1927	138	46
1928	154	46
1929	130	44
1930	98	35
1931	67	27
1932	53	20
1933	77	21

The price for No. 2 Red Winter in Chicago has accordingly fallen from 128 cents per bushel in 1924 to 77 in 1933, *i. e.*, by 51 cents per bushel or 40 per cent. Prices for butter, creamery extra, Chicago, have fallen from 44 (1925) to 21 cents, or 23 cents, or 52 per cent.

If these prices are compared with the prices of the sources of power, coal, gasoline and electricity, the following is the movement of exchange values obtained.

Exchange Value of Wheat in United States.

Years	Number of bushels of wheat required to purchase.		
	1 short ton coal	100 gallons gasoline	100 kwh. electricity
1924	3.29	9.53	—
1925	2.32	7.51	—
1926	2.80	8.31	—
1927	3.09	6.67	—
1928	2.62	6.43	0.99
1929	3.04	7.00	1.06
1930	3.99	7.45	1.46
1931	5.58	7.46	2.16
1932	6.87	10.75	2.89
1933	4.77	6.62	1.79

Exchange Value of Butter in United States.

Years	Number of pounds of butter required to purchase: 1 short ton coal	100 gallons gasoline	100 kwh. electricity
1924	—	—	—
1925	9.34	30.23	—
1926	10.02	29.79	—
1927	9.62	20.00	—
1928	8.76	21.52	3.07
1929	8.98	20.68	3.14
1930	11.17	20.86	4.09
1931	13.85	18.52	5.37
1932	18.20	28.50	7.65
1933	17.48	24.28	6.57

It appears from the course of the exchange value of wheat, that the value of wheat as compared with coal and electricity fell considerably between 1924 and 1932, although with fluctuations in respect of coal. On the other hand the wheat values in respect of gasoline up to 1931 improved, but in 1932 fell also very considerably. In consequence of various Government measures taken in the United States there was a slight improvement in 1933 almost equally in respect of all sources of power, but in the case of gasoline only is the position of 1924 again reached and even improved upon.

The following has been the course of the exchange value of butter: in respect of coal there is a slight improvement of the relation from 1925 to 1929, although with some fluctuations. Then up to 1932 there was marked deterioration, the value of butter in respect of coal being twice as low as in 1925, but in 1933 there was a slight recovery although the position was still highly unfavorable as compared with 1925. In relation to gasoline there was a real improvement in the position up to 1931, but afterwards in 1932 a more marked deterioration and in 1933 a marked recovery. In relation to electricity the exchange value of butter fell off markedly from 1928 to 1932, but recovered a little in 1933.

The course of gasoline prices in the 10 years from 1924 to 1933 has thus been very similar to that of the prices of both the agricultural products taken, while prices of the other sources of power declined to a much less extent. This fact may have been a factor in the competition between coal and gasoline, or between steam and gas engines, as appears from the course of the consumption of coal and petroleum and from the figures relating to power machinery as shown above.

It is to be regretted that owing to want of statistical data it is not possible to state in more detail the conditions of the utilisation of power machinery in agriculture in the United States of America.

V. — Italy.

Great progress has been made since 1924 in the application of power machinery to Italian agriculture, and this development has received special encouragement, as will be shown later, by means of Government measures. Some survey may first be given of the increase in the use of tractors in Italian agriculture.

Number of Tractors Employed in Agriculture in Italy
1924-1934.

Years	Number	Years	Number
1924	5,840	1930	24,044
1925	7,250	1931	26,542
1926	12,475	1932	28,162
1927	16,178	1933	29,611
1928	18,184	1934	30,215
1929	21,065		

The number of tractors utilised in Italian agriculture has thus increased by nearly five times since 1924. From 1928 the stationary petroleum engines have been reckoned separately, while up to 1928 they were included in the above figures, so that the relative rise in the number of tractors in somewhat larger than would appear from the figures.

The count of stationary petroleum engines in Italian agriculture gave the following figures:

Years	Number	Years	Number
1928	3,111	1932	11,101
1929	4,811	1933	14,669
1930	6,587	1934	16,003
1931	8,869		

The increase in the numers of these stationary engines run on petroleum is thus also very marked.

The advance seems to have been substantially furthered by the Italian policy adopted in respect of prices of petroleum, which resulted in prices for treated petroleum for tractors taking the following course since 1926.

From 1926 to 1934 the price in Italy of petroleum for farm purposes had fallen from 1,400 to 370 liras per 1000 kg., or by more than 75 per cent. This fact is of very great importance in regard to the purchasing power of growers of farm products in respect of this petroleum.

Prices of Petroleum for farm use treated for impurities.

Years	Liras per 1000 kg		Years	Liras per 1000 kg	
1926	1,400		1932	430	(1st half year)
1927	778.50			402.50	(2nd half year)
1928	680		1933	402.50	(till 31 March)
1928	680			385	(1 April to 15 October)
1930	680	(1st half-year)	1934	370	(15 October 1933 to 31 December 1934)
	630	(2nd half-year)			
1931	550	(1st half year)			
	500	(2nd half year)			

From 1926 to 1933 price formation for Italian wheat was as follows:

Price of Wheat "buono mercantile" Milan.

Years	Liras per 100 kg	Years	Liras per 100 kg
1926	200.88	1931	100.85
1927	140.65	1932	109.75
1928	134.09	1933	91.45
1929	131.10	1934	86.25
1930	127.00		

The price of Italian wheat has not fallen so much as the price for petroleum for farm use, so that the exchange value of wheat in respect of farm petroleum in Italy has taken the following course:

Exchange Value of Wheat as compared with Farm Petroleum in Italy 1926-1934.

Years	Number of quintals of wheat required to purchase 1000 kg farm petroleum	Years	Number of quintals of wheat required to purchase 1000 kg. farm petroleum
1926	6.97	1931	5.21
1927	5.53	1932	3.77
1928	5.07	1933	4.31
1929	5.19	1934	4.29
1930	5,16		

According to the above calculation the Italian wheat grower in 1926 had to sell 6.97 quintals of wheat to buy kg. 1000 of petroleum for farm use, whereas in 1928 this figure fell to 5.07 and in 1932 to 3.77 quintals wheat for the same

quantity of petroleum, rising somewhat in 1933 and falling again in 1934. The saving for the wheat grower in respect of supplies of fuel oil as compared with 1926 was actually 3.20 quintals of wheat per 1000 kg. of petroleum in 1932 and 2.68 quintals in 1924.

This effective cheapening of petroleum for farm purposes has naturally done much to encourage the application of fuel oil engines of all kinds in Italian agriculture, and in the second place it has led to an increased consumption of petroleum for farm uses Expressed in round figures the consumption of this petroleum treated for removal of impurities and for farm purposes only has been as follows in Italy from 1924 to 1934.

Consumption of Farm Petroleum in Italy 1924-1934.

Years	1000 quintals	Years	1000 quintals
1924	175	1930	865
1925	213	1931	785
1926	423	1932	778
1927	508	1933	843
1928	635	1934	983 (1)
1929	779		

There can be no doubt that the development of power machinery in Italian agriculture has received a strong impetus from the policy in regard to the price of petroleum for farm purposes. The difference in price as compared with that of petrol or motor spirit for other than agricultural purposes is quite extraordinary. In April 1935 petroleum for farm purposes cost 36 liras for 100 kg. in casks, with an additional charge for transport of 4 liras, or 40 liras in all per 100 kg., on the other hand, ordinary petrol or light motor spirit cost 281.40 liras inclusive of transport charges, or about seven times as much.

The Fascist organisation, in this case, the *Sezione Utenti Motori Agricoli* of the *Confederazione degli Agricoltori*, organises the supervision of the exclusive use of the red-coloured petroleum for farm purposes only. This body also arranges delivery contracts with the foreign mineral oil companies, the selling price being during the first few years fixed for the whole year in advance later for the half year and now from month to month. The petroleum for agricultural purposes is in Italy free from any tax or other charge.

VI.

The absence of sufficient statistical data concerning the sources of power for agriculture does not permit us to present here a more detailed survey of the advances made in this respect. The price relations between important agri-

(1) 935,000 quintals petroleum and 48,000 quintals naphtha.

cultural products and sources of power, such as coal, motor spirit, petroleum and electric current indicate however that from country to country there are great differences in the purchasing power of growers in respect of these means of production in the period under review.

It is of interest that a price policy meeting the needs of the farmers on the market of sources of power (coal, petroleum, etc.) can exercise a great influence on the development of the utilisation of machinery, as is shown markedly in the price policy in Italy for farm petroleum.

CURT KAPPSTEIN.

Sources:

ENGLAND AND WALES:

Ministry of Agriculture and Fisheries: *Agricultural Statistics.* Part I, and II.

SCOTLAND:

Board of Trade: *Statistical Abstract for the United Kingdom.*
Department of Agriculture for Scotland: *Agricultural Statistics.* Part I.

GERMANY:

Statistisches Reichsamt, Berlin: *Statistisches Jahrbuch des Deutschen Reiches. Landwirtschaftliche Betriebszaehlung.*
International Institute of Agriculture, Rome: *International Yearbook of Agricultural Statistics.*

UNITED STATES OF AMERICA.

U. S. Department of Agriculture: *Yearbook of Agriculture.*
U. S. Department of Commerce: *Statistical Abstract of the United States.*

ITALY:

Confederazione Nazionale Fascista degli Agricoltori: *Dieci anni di attività sindacale.*
International Institute of Agriculture, Rome: *Monthly Crop Report and Agricultural Statistics.*

PUBLICATIONS RECEIVED BY THE LIBRARY

Books.

Political Science.

MUSSOLINI, B. La dottrina del fascismo. Storia, opere ed istituti a cura di A. MARPICATI, M. GALLIAN, L. CONTU. Milano, Hoepli, 1935. VII, 316 p. (Collezione Hoepli).

Economics.

GRAZIANI, A. Studi di critica economica. Milano, « Dante Alighieri », 1935. 335 p.

GREAT BRITAIN. Customs and excise department. Customs and excise tariff of the United Kingdom of Great Britain and Northern Ireland in operation on the 1st January, 1935. London, H. M. Stationery office, 1935. XX, 315 p.

Rural Economics.

BONOW, M. Staten och jordbrukskrisen. Stockholm, Kooperativa förbundets bokförlag, 1935. 372 p.
[The State and the agricultural crisis].

PROCEEDINGS OF THE THIRD CONFERENCE OF AGRICULTURAL ECONOMISTS held at Bad Eilsen (Germany). 26 August to 2 September 1934. London, Oxford university press, 1935. XII, 498 p.

TORREJON Y BONETA, A. DE. Economia y valoración agricola, forestal y urbana. Madrid, Agro español, [1934]. XIII, 607 p.

VIGIANI, D. Trattato di economia rurale. Milano, « Dante Alighieri », 1935. X, 399 p.

Internal Colonization.

POMPEI, M. Nasce la famiglia colonica. Esperienze pontine. Bonifica dei beni collettivi. Roma, Gestione speciale delle Università agrarie di Sermoneta, Cisterna e Bassiano, 1934. 97 p.

WILHELMY, H. Hochbulgarien. Kiel, [Buchdruckerei Schmidt & Klaunig]. 1935 (Schriften des Geographischen Instituts der Universität Kiel. Bd 4).
v. 1 Die ländlichen Siedlungen und die bäuerliche Wirtschaft. 1935. 316 p.

Co-operation.

THE CO-OPERATIVE DIRECTORY 1934. Manchester, Co-operative union Ltd , [1934]. 555 p.

MATHEWS, K. DerBetriebsvergleich in landwirtschaftlichen Warengenossenschaften unter besonderer Berucksichtigung Ostpreussens. Berlin, Ebering, 1935. 149 p. (Volkswirtschatliche Studien. hrsg. von. E. Ebering. Hft. 47).

Insurance.

MAGGI, U. Mutualità agraria. Associazioni agrarie di mutua assicurazione del bestiame. Brescia, Vannini, 1935. 257 p. (Collana zootecnica G. Vannini).

Legislation.

JACKSON, T. C. Agricultural holdings, being the Agricultural holdings act 1923, together with a manual on tenant-right valuation. 8th ed. by W. HANBURY AGGS. London, Sweet & Maxwell, 1934. XVI, 392 p

PROCEEDINGS OF THE FORTY-EIGHT ANNUAL CONVENTION OF THE ASSOCIATION OF LAND-GRANT COLLEGES AND UNIVERSITIES held at Washington, D. C. November 19-24, 1934., edited by CH. A. MC. CUE. Wilmington, Cann Bros., [1935]. 305 p.

Industry.

BERNADZIKIEWICZ, T. Zagadnienie rentownosci przedsibiorstw. Warszawa, Towarzystwo wydawnicze młodych prawników i ekonomistów, 1935. 108 p.
[The problem of profit in business].

Various.

Associazione italiana per le biblioteche. Il terzo Congresso della Associazione italiana per le biblioteche. Bari, 20-23 ottobre 1934. Roma, Biblioteca d'arte editrice, [1935]. 147 p.

Bureau international de l'enseignement technique. Paris. Congrès international de l'enseignement technique, Barcelone 17-18-19 mai 1934. [Rouen, Imprimerie Wolf], [1935], 2 vols.

Fünfter Internationaler Kongress für Hauswirtschaftsunterricht. Berlin, 21-26 August 1934. Gesamtbericht. Hrsg. von der Deutschen Pädagogischen Auslandstelle (Pädagogische Abteilung des Deutschen Akademischen Austauschdienstes e. V. Berlin). Berlin, Verlag Kulturpolitische Gesellschaft, 1934. 294 p.

Répertoire général de Belgique. La Belgique alphabétique par spécialités et par noms. 11ième année. 1935. Gand, 1935.

Robequain C. L'Indochine française. Paris, Colin, 1935. 224 p. (Collection Armand Colin. Section de géographie, nº 179).

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THE IMPORTANCE OF PIG BREEDING FOR THE PROFIT CAPACITY OF AGRICULTURE IN CERTAIN COUNTRIES OF EUROPE FROM 1927-28 TO 1931-32

II. — NORWAY, SWEDEN, FINLAND, POLAND, LITHUANIA, LATVIA AND ESTONIA

In this article we pass on to a group of countries, including Norway, Sweden and Finland, which, as is well known, are dependent on their export trade to the United Kingdom.

In NORWAY during the period under review there has been marked development in the direction of dairying and pig breeding. The production of pigmeat rose from 76 kg. of live weight per hectare in 1927 to 78 kg. in 1928, to 82 kg. in 1929, to 105 in 1930 and to 104 kg. in 1931. Dairy production rose from 1,380 kg. of milk per hectare in 1927 to 1,425 kg. in 1929 and to 1,582 kg. in 1931. But prices of all agricultural products declined with greater or less rapidity, prices of cereals, potatoes and dairy products from 1927 onwards, and meat prices from 1928. In 1931 prices had fallen very low, and the total gross return had diminished by 518 francs per unit of area (1.64 ha.) as compared with 1927. The item in the gross return which showed least decline was that of pig breeding, the production having increased, as already stated, by 28 kg. per hectare from 1927 to 1931.

In 1930 Norway was compelled noticeably to reduce exports in fresh and condensed milk which were considerable in 1929. In 1931 there was a marked rise in these exports. On 24 June 1931 the Government enacted a law relating to the admixture of butter with all margarine sold in the country. Norway began to export increasing quantities of pigs: in 1931 there was a marked decline, and there may also be noted a very large increase in egg exports.

In 1928 and 1929 the farm expenses showed a more marked decline than the gross return, the difference in the decline was less marked in 1930 and still less in 1931, so that the net return, which followed an ascending curve up to 1929, rapidly diminished from 1929 to 1931. The most important decrease was that in agricultural wages. The farm worker who received 5.99 gold francs in 1927 for his day's work received not more than 4.38 in 1931. The price of concentrated stock feeds, after increasing in 1928, subsequently fell rapidly, or by 82 per cent. from 1928 to 1931. Norwegian farmers were thus enabled to import increased quantities of concentrated feeds, especially maize for pigs,

TABLE I. — *Increase or Decrease in the Net Return, the Gross*

Gold francs per

	Net return	Gross Return: Pigs	Gross Return: Milk and milk products	Gross Return: Stock breeding (slaughter beasts etc.)	Gross Return: Cereals root crops	Gross Return: Other branches	Gross Return: Total
Denmark:							
1927-28	100	577	691	263	114	1.116	1.761
Norway:							
1927-28	+ 48	422	— 126	+ 67	+ 128	+ 151	— 202
1928-29	+ 74	— 390	— 125	+ 12	+ 112	+ 176	215
1929-30	+ 78	— 400	— 154	+ 30	+ 55	+ 133	— 336
1930-31	+ 6	— 423	— 163	+ 28	+ 24	+ 105	— 429
1931-32	— 62	— 461	— 250	— 67	+ 28	+ 30	720
Sweden:							
1927-28	— 62	— 534	— 330	— 103	+ 117	— 35	— 885
1928-29	— 29	529	— 321	— 102	+ 157	— 41	— 836
1929-30	— 49	496	— 328	116	+ 97	41	— 884
1930-31	— 71	— 514	— 365	126	+ 106	— 49	— 948
1931-32	— 118	— 535	— 426	— 152	+ 57	— 58	— 1,114
Finland:							
1927-28	— 21	— 533	— 432	— 190	7	— 58	— 1,220
1928-29	— 39	— 533	— 415	— 188	21	— 56	— 1,213
1929-30	— 47	— 532	446	194	— 37	— 60	— 1,269
1930-31	— 45	— 540	— 484	205	— 33	— 65	— 1,327
1931-32	— 51	— 551	— 517	— 223	47	— 81	— 1,449
Poland:							
1927-28	+ 92	— 496	593	— 149	+ 70	— 34	1,202
1928-29	+ 42	— 500	— 582	— 158	+ 62	— 26	— 1,204
1929-30	— 1	— 492	— 590	— 164	+ 13	— 53	— 1,286
1930-31	— 74	— 534	— 611	— 194	± 0	— 63	— 1,402
1931-32	— 90	— 544	— 630	— 217	— 24	— 66	— 1,481
Lithuania.							
1928-29	— 72	— 539	— 648	— 239	22	— 51	— 1,499
1929-30	— 47	— 528	— 636	— 234	— 34	— 64	— 1,496
1930-31	— 65	— 533	— 629	— 244	— 42	— 56	— 1,504
1931-32	— 101	— 536	— 649	— 248	— 70	— 50	— 1,553
Latvia:							
1927-28	— 70	— 539	— 600	— 236	— 61	— 70	— 1,506
1928-29	— 115	— 545	— 616	— 220	— 72	— 67	— 1,520
1929-30	— 60	— 542	— 604	— 221	— 70	— 47	— 1,484
1930-31	— 69	— 540	— 593	— 230	— 47	— 62	— 1,472
1931-32	— 132	— 555	— 625	— 243	— 73	— 76	— 1,572
Estonia:							
1927-28	— 68	— 541	— 618	— 224	— 65	— 37	— 1,485
1928-29	— 79	— 540	— 612	— 225	— 64	— 49	— 1,490
1929-30	— 82	— 537	— 610	— 228	— 70	— 49	— 1,494
1930-31	— 88	— 547	— 624	— 233	— 73	— 57	— 1,534
1931-32	— 112	— 558	— 637	— 238	— 72	— 66	— 1,571

(1) The net return of Danish farms in 1927-28 is taken as the key figure, the figures showing the gross return, farm expenses, interest on capital and cost of production in Denmark for 1927-28, in the first line for the table, form the basis of comparisons, the figures for the other years and the other countries

Return and the Cost of Production from 1927-28 to 1931-32 (1)

unit of area

Labour	Fertilisers	Seed and forage	Taxes	Other expenses	Total	Interest on capital	Cost of production
616	68	688	64	255	1 661	265	1 [illegible]
+ 71	+ 3	— 392	— 54	+ 122	— 250	+ 186	— 64
+ 27	- 1	— 407	— 54	+ 146	289	+ 186	10[illegible]
— 27	+ 1	— 444	— 55	+ 111	— 414	+ 152	262
— 47	— 1	— 455	— 55	+ 123	— 435	+ 140	— 295
— 157	— 22	— 493	— 56	+ 70	658	+ 75	— 583
— 209	- 18	— 526	- 54	- 16	823	79	— 902
— 212	— 14	— 509	— 54	— 18	— 807	— 80	— 887
— 227	— 12	— 526	— 54	— 16	— 835	75	— 908
- 233	— 13	— 555	— 54	22	— 877	— 75	- 952
— 299	— 25	— 570	- 54	50	- 996	100	- 1 096
— 364	— 35	— 613	— 54	— 133	— 1 199	- 111	- 1 310
— 350	— 40	— 599	— 53	— 132	1 174	- 96	- 1 270
— 373	- 41	— 623	— 56	— 129	- 1 222	93	— 1 315
— 401	- 49	- 639	— 58	— 155	— 1 282	98	— 1 380
— 471	— 55	— 653	— 59	— 160	— 1 398	- 14[illegible]	- 1 540
— 411	— 48	— 648	- 55	— 132	— 1 294	90	— 1 384
- 399	— 43	— 651	53	100	— 1 246	47	— 1 293
420	49	- 663	— 53	- 100	— 1 285	— 45	— 1 330
— 435	— 58	— 664	— 54	117	— 1 328	57	— 1 385
- 462	— 62	— 673	— 54	140	— 1 391	85	1 479
— 480	— 54	— 664	— 57	172	— 1 427	164	— 1 591
— 489	— 54	- 677	— 56	— 173	- 1 449	170	- 1 619
— 491	- 55	— 667	— 56	170	— 1 439	— 167	1 606
— 481	— 60	— 679	— 57	— 175	- 1 45[illegible]	173	— 1 625
— 467	— 55	— 665	— 58	191	— 1 436	— 211	— 1 647
— 473	— 59	— 659	— 60	154	— 1 405	221	- 1 626
— 478	— 53	— 666	— 60	— 167	- 1 424	— 221	— 1 645
— 472	— 54	— 667	— 59	— 151	— 1 403	214	— 1 617
— 486	— 55	— 676	— 59	164	— 1 440	— 214	- 1 654
— 461	— 61	— 661	— 59	— 175	1 417	— 203	— 1 620
— 461	— 61	— 660	— 59	— 170	— 1 411	— 212	- 1 623
— 462	— 60	— 664	— 60	— 166	— 1 412	- 210	— 1 622
— 482	— 63	— 673	— 60	— 168	- 1 440	— 210	— 1 656
— 498	— 63	— 675	— 60	— 163	— 1 459	— 208	— 1 667

show the difference, positive or negative, in each case All the figures refer to the conventional unit of area adopted here, *viz*, the area (1 64 ha) which corresponds to a net return of 100 francs in Denmark in 1927-28

TABLE II. — *Prices in gold francs of the chief agricultural products* (*).

(Data supplied by the Accountancy Officies and the International Yearbook of Agricultural Statistics)

Designation	Cereals q.	Potatoes q.	Beet kg.	Pig meat kg.	Milk litre	Butter kg.	Cheese kg
Norway:							
1927-28	**36.84**	**21.83**	1) 2.16	1) 1.84	0.25	**5.07**	**3.94**
1928-29	36.07	16.65	1) 2.05	1) **2.18**	**0.25**	4.87	3.91
1929-30	34.61	8.35	1) **2.19**	1) **1.95**	0.23	4.53	3.65
1930-31	27.62	11.05	1) 2.18	1) 1.35	0.23	4.52	3.65
1931-32	19.03	8.33	1) 1.27	1) 1.02	0.17	2.93	2.76
Sweden:							
1927-28	31.73	19.07	2) 0.86	2) 1.27	0.23	4.15	2.13
1928-29	26.67	21.53	2) 0.83	2) 1.51	0.25	4.17	2.11
1929-30	25.53	11.20	2) 0.84	2) **1.57**	0.24	3.70	1.67
1930-31	27.21	10.11	2) 0.80	2) 0.97	**0.29**	2.98	1.63
1931-32	21.56	11.20	2) 0.52	2) 0.66	0.25	2.28	1.38
Finland:							
1927-28	33.32	9.14	2) 1.14	1) 1.54	0.22	4.06	2.19
1928-29	33.37	10.47	2) 1.19	1) 1.69	0.22	4.17	2.22
1929-30	27.32	9,15	2) 1.02	1) **1.70**	0.20	3.76	2.29
1930-31	24.18	5.85	2) 0.82	1) 1.27	0.17	3.02	2.01
1931-32	25.13	4.79	2) 0 50	1) 0.76	0.13	2.15	1.53
Poland:							
1927-28	29.99	5.59	2) 1.73	2) 1.19	0.17	—	—
1928-29	26.98	5.37	2) 1.54	2) 1.15	0.19	—	—
1929-30	23.76	4.14	2) 1.52	2) **1.38**	0.18	3.43	—
1930-31	16.29	3.41	2) 1.14	2) 0.76	0.15	2.81	—
1931-32	14.38	2.91	2) 0.45	2) 0.54	0.12	2.29	—
Lithuania:							
1929-30	14.58	4.05	2) 0.93	1) **1.66**	0.21	3.55	0.88
1930-31	8.41	1.62	2) 1.01	1) 1.57	0.19	3.10	0.75
1931-32	7.07	1.93	2) 0.85	1) 1.11	0.17	2.61	0.67
Latvia:							
1927-28	37 —	—	2) 0.92	1) 1.57	—	3.19	—
1928-29	34.10	—	2) 0.92	1) 1.68	—	3.49	—
1929-30	29.04	—	2) 1.30	1) **2.19**	—	3.69	—
1930-31	26.88	—	2) 1.38	1) 1.89	—	3.41	—
1931-32	12.69	—	2) 1.13	1) 1.09	—	3.18	—
Estonia:							
1927-28	30.54	5.85	2) 0.74	3) 1.22	0.21	3.74	3.39
1928-29	33.69	9.85	2) 0.78	3) 1.42	0.22	4.12	3.39
1929-30	32.56	7.57	2) 0.89	3) **1.58**	0.25	3.97	3.47
1930-31	28.95	4.88	2) 0.74	3) 1.32	0.21	3.07	3.44
1931-32	29.89	4.55	2) 0.74	3) 0.95	0.12	2.59	2.66

(1) Meat — (2) Live weight — (3) Bacon

(*) The highest prices are shown in thick type in the table.

TABLE III. — *Production per hectare from 1927-28 to 1931-32.*

Designation		Production per ha. (1)			Gross Return (in quantities per ha) (2)					Gross Return in % of production	
		Cereals	Potatoes	Sugar beet	Cattle live weight	Milk	Pigs live weight	Cereals	Potatoes	Cereals	Potatoes
		q.	q.	q.	kg.	kg.	kg.	q.	q.	%	%
Norway	1927-28 . . .	3.37	6.41	—	90	1,380	76	2.28	3.67	68	57
	1928-29 . . .	3.53	9.99	—	82	1,382	78	2.80	3.46	79	35
	1929-30 . . .	3.24	9.06	—	88	1,425	82	2.65	4.78	82	53
	1930-31 . . .	3.31	7.67	—	90	1,400	105	241	3.73	73	49
	1931-32 . . .	2.64	7.63	—	93	1,582	104	2.07	4.42	78	58
Sweden	1927-28 . . .	5.82	2.01	2.12	65	957	20	4.23	0.68	73	34
	1928-29 . . .	6.51	3.63	2.33	72	904	19	5.81	0.78	89	22
	1929-30 . . .	6.38	3.75	1.53	60	924	31	5.67	1.51	89	40
	1930-31 . . .	6.51	3.50	2.40	63	685	38	4.84	2.50	74	71
	1931-32 . . .	5.30	2.94	1.74	77	647	38	4.63	1.43	87	49
Finland (3)	1927-28 . . .	3.55	3.53	0.16	19	719	26	1.79	1.10	50	31
	1928-29 . . .	3.18	2.05	0.14	20	765	24	1.56	1.21	49	59
	1929-30 . . .	3.18	2.27	0.09	19	747	24	1,60	1,22	50	54
	1930-31 . . .	4,46	2,92	0,10	15	744	27	1.94	2.18	43	75
	1931-32 . . .	3.83	2.78	0.11	15	730	31	2.01	1.82	52	69
Poland	1927-28 . . .	4.67	10.22	1.38	15	352	41	3.42	3.45	73	34
	1928-29 . . .	5.12	10.65	1.88	15	351	41	3.66	3.51	71	33
	1929-30 . . .	5.79	12.33	1.93	14	337	38	3.76	2.43	65	20
	1930-31 . . .	5.46	11.78	1.78	11	325	35	4.13	3.66	75	31
	1931-32 . . .	5.03	11.64	1.04	16	310	38	3.21	3.36	64	29
Lithuania	1927-28 . . .	3.15	3.03	—	—	—	—	—	—	—	—
	1928-29 . . .	3.02	2.30	—	—	—	—	—	—	—	—
	1929-30 . . .	4.12	4.44	—	11	160	27	3.30	1.92	80	43
	1930-31 . . .	4.41	4.52	—	6	200	26	5.02	3.20	99	71
	1931-32 . . .	4.03	5.17	—	4	151	34	2.78	2.01		39
Latvia	1927-28 . . .	1.88	1.67	—	12	397	22	—	—	—	—
	1928-29 . . .	1.58	0.80	—	14	306	18	0.69	—	43	—
	1929-30 . . .	2.32	2.68	—	11	329	15	0.71	—	31	—
	1930-31 . . .	2.69	2.35	—	8	399	18	1.88	—	70	—
	1931-32 . . .	2.02	2.32	—	5	2,88	18	1.07	—	53	—
Estonia	1927-28 . . .	1.55	2.40	—	14	212	18	0.80	1.18	52	49
	1928-29 . . .	1.40	1.62	—	13	218	16	0.71	0.85	51	52
	1929-30 . . .	1.70	2.44	—	11	197	16	0.70	1 —	41	41
	1930-31 . . .	2.09	2.80	—	10	194	14	1.11	0.85	53	30
	1931-32 . . .	1.88	2.77	—	7	272	12	1.06	0.86	56	31

(1) Figures based on the data of the International Yearbook of Agricultural Statistics and referring to the area used as basis for the transformation calculations of accountancy results, such area not being the same throughout, as certain Offices include in the area forests, waters, etc., while others exclude these. In consequence the figures are not precisely comparable from one country to another.

(2) Figures based on accountancy data, and referring also for each country to an area calculated according to the usage of the Offices, as already explained under (1). In the first 3 columns are shown the quantities harvested per hectare of the area taken into consideration; in the five following columns the quantities which are components of the gross return, *viz.*, those sold or consumed by the farm household, excluding quantities transformed on the farm. This accounts for the varying difference shown.

(3) The area is estimated.

without finding their expenditure on fodder greater. Maize imports rose from 81,145 metric tons in 1929 to 135,575 in 1930, and to 199,696 in 1931 (1). Prices of building materials also fell from 1928 to 1931 in nearly the same proportions as those of concentrated feeds.

In SWEDEN the net return from farms was lower than in Norway; the decline was less marked but none the less it fell in 1931, below zero. Natural soil conditions, especially in the Skåne and in the agricultural plains of Central Sweden seem to be more favourable to cropping than in Norway. As in Denmark, agriculture in Sweden is directed towards dairy farming: with the progress of this branch of farming, there was an increasing development of pig breeding.

Beginning from 1928 a marked increase may be noted in the butter exports; in 1930, Sweden exported 26,674 tons of butter as compared with 17,545 in 1928; in 1931 however the butter exports were not more than 19,525 tons (1). As compared with 1927, there was a fall in milk production in 1930 of nearly 300 kg. per hectare; it did not recover in 1931. Prices of milk products also fell, and of all the items in the gross return dairying production was the one that showed in 1931 most decrease. In 1928 and in 1929 on the other hand with an increased production and a maintenance of prices, the gross return of this branch of farming increased as compared with 1927. Pig breeding was intensified; the exports continued to increase, and the gross return from this branch of production, in spite of the fall of prices, remained the most stable of all.

In 1931 there was a further intensification of cattle farming in Sweden, but the prices of meat continued to decrease, and the gross return shows a slow but constant fall. For all these reasons, the total gross return maintained up to 1929 the level of 1927; in 1930 it fell by 6 per cent., and in 1931 by 25 per cent.

TABLE IV. — *Labour in man-days per ha. and wages in gold francs per man-day of a farm worker* (a).

Designation	Labour in man-days					Farm wages in gold francs per man-day				
	1927-28	1928-29	1929-30	1930-31	1931-32	1927-28	1928-29	1929-30	1930-31	1931-32
Norway	70	66	64	64	64	5.99	5.90	5.62	5.42	4.38
Sweden	—	—	—	—	—	—	—	—	—	—
Finland	36	38	33	42	42	4.22	4.31	4.48	3.13	2.09
Poland	67	64	67	68	70	1.87	2.07	1.78	1.62	1.34
Lithuania	—	31	35	34	45	—	2.65	2.19	2.22	1.82
Latvia	25	25	25	26	28	3.57	3.42	3.38	3.39	2.82
Estonia	27	27	27	26	27	3.55	3.56	3.47	3.17	2.69

(1) *International Yearbook of Agricultural Statistics.*

(a) Information taken from accountancy data.

TABLE V. — *Prices of Farm Requisites (index-numbers)* (a).

Designation	Chemical fertilisers	Concentrated feeds	Building Materials	Machinery and implements
Norway:				
1927-28	100	100	1) 100	
1928-29	93	105	1) 119	—
1929-30	92	86	1) 103	—
1930-31	90	55	1) 58	
1931-32	79	41	1) 37	—
Sweden:				
1927-28	100	100	100	100
1928-29	93	101	91	99
1929-30	90	75	88	100
1930-31	88	45	83	102
1931-32	85	47	71	97
Finland:				
1927-28	100	100	100	100
1928-29	104	103	96	95
1929-30	70	76	216	79
1930-31	67	56	112	77
1931-32	71	59	115	81
Poland.				
1927-28	100	2) 100	—	
1928-29	109.5	2) 104.2		
1929-30	126.5	2) 103.3		—
1930-31	127.8	2) 94	—	—
1931-32	120.2	2) 79.4		
Estonia:				
1927-28	3) 100	—	—	—
1928-29	3) 103	—		—
1929-30	3) 85	—		—
1930-31	3) 63	—	—	
1931-32	3) 74	—		—

1) Maize — 2) Manufactured goods — 3) — Imported commodities

As in the other countries, the farm expenses did not fall in such a proportion, as the gross return. It is only in 1931 that the labour costs show any marked decrease and the same is the case with fertiliser costs. The expenditure for purchases of concentrated feeds begin to fall in 1930, owing to the fall in prices of these feeds. In order to intensify pig breeding Sweden increased the imports of maize from 76,833 tons in 1929 to 134,335 tons in 1930 and to 351,899 tons in 1931 (1).

(a) Information taken from International Yearbook of Agricultural Statistics.

(1) *International Yearbook of Agricultural Statistics*, Rome.

The most important measure taken by the Swedish Government for the protection of agriculture was the law of the spring of 1931 on the introduction of the monopoly of cereals. By this law there is accorded to the Swedish Cereal Society, an association of millers open on payment of a certain subscription to any person or association managing a mill, the exclusive right to import wheat, rye, wheat flour and rye flour, up to 31 December 1932 and to impose on these cereals a certain equalisation levy to cover expenses and losses. Another important measure is the levying of general taxes and local charges on milk and on cream. The object of this measure is to raise the prices of butter and of cheese on the home market and to equalise the prices of milk intended for direct consumption and those of industrial or manufacturing milk.

The Swedish Government has constituted funds enabling loans to be made on terms to farmers in cases where the debts exceed the value of the assets, and assistance loans to farmers having difficulty in purchasing necessary live or dead farm stock, always provided they are in a position to continue farming.

In 1931 similar measures were taken by FINLAND. A law of 30 September empowered the Government to fix at the beginning of each farming season the proportion of home grown rye and oats which must be mixed with rye and oats for the manufacture of flour.

Endeavours were also made on the part of the State to consolidate farmers' debts. Consolidation loans are granted up to 70 per cent. of the value of lands and to 30 per cent. of that of moveable property and of forests. The rate of interest charged is 7 ½ per cent. These bonds are guaranteed by the State and are exempt for a period of ten years from State taxes on income and on property.

The harvest of 1931 was not so plentiful as that of 1930. The export of butter reached the record figure of 17,403 tons, as compared with 17,112 in 1930. Exports of meat, cheese, bacon and eggs also very considerably increased, especially the egg exports; expressed as index numbers the egg exports rose from 100 in 1927 to 224 in 1929 to 2,433 in 1930 and to 10,592 in 1931.

From 1927 to 1931 the net return fell by more than half. The gross return stood in 1928 at the same level as in 1927; then from 1928 to 1931 the fall was at an increasing rate. The gross return from pig breeding remained nearly unchanged; the increase in production compensated for the price decline. The most marked decrease appeared in the gross return from dairying; the reason for this may be found in the collapse of market prices.

Labour costs fell in 1930 and especially in 1931; wages fell. Comparable with the decrease in labour costs was that in expenditure for purchases of concentrated feeds, fertilisers and building materials taken all together in 1931, taken separately building materials rose in price in 1928, 1929 and 1930, while fertiliser prices and feed prices rose in 1928.

This comes out clearly in Tables I and V. Although the farmers benefited in a certain degree from the fall in wages and in the prices of concentrated feeds, the decrease was not enough to counterbalance entirely the effects of the fall in prices of agricultural products.

In the three countries, Norway, Sweden, Finland, as in Denmark, the situation of pig breeding remained satisfactory up to 1931, as exports could be made freely, especially to the United Kingdom markets.

The third group of countries includes Poland, Lithuania, Latvia and Estonia.

The earning capacity of agriculture in POLAND was excellent in 1927 and in 1928. Expenditure for purchases of fertilisers and other current expenses increased in 1928, following the movement of prices of fertilisers and manufactured commodities; in 1929 however these costs reverted to the 1927 level. In 1929 the gross return diminished, although the gross return from pig breeding and that from dairying did not fall, prices remained high or even showed a rise. In 1930 it was mainly the fall in milk prices which brought about the decrease in the gross return of dairying production in that year. Pig breeding is an important branch of Polish agriculture; the importation of porkers is seen to be rapidly growing in the years under review. The export of pigs was at its highest point in 1928 and by 1930 was reduced by 34 per cent. On the other hand, there must be noted in 1931 the increase in the bacon exports. The number of pigs slaughtered for bacon was 116,000 in 1928 and 1,000,000 in 1931. In 1929 the prices of pigs rose in consequence of the favourable market conditions of 1928; but in 1930 there was great pressure of stocks in Poland; pig prices showed an abrupt fall; from 1929 to 1930, the gross return from pig breeding was much reduced; Poland increased cereal exports, but at constantly lower prices which affected the gross return. Weather conditions were unfavourable in 1930 and in the summer of 1931 the winter crops suffered and to some extent the root crops.

Summarising, the gross return showed a general reduction in 1930-31, the prices of all farm products fell. Farm expenses did not fall in the same proportion and the net return showed a sharp fall. This was still more apparent in 1931-32, and the gross return continued, as in all countries so far reviewed, to decrease in a greater degree than the farm expenses. The gross returns which since 1927 have fallen to the greatest extent are those from cereals and root crops and that of cattle breeding. The decreases in the gross return of dairying and pig breeding are much less marked.

Taking farm expenses, since 1930 Polish farmers have reduced their fertiliser purchases by nearly one half; the expenditure for these purchases however did not diminish, as the prices tended to rise. Nor did labour costs fall; although wages were lower there was an increase in the number of work days per hectare.

Polish agriculture has become less intensive; fertiliser consumption diminished in 1931 by 71 per cent. and orders for farm machines by 97 per cent.

Close attention has been given by the Government to the future of agriculture in the country. Import and export premiums have been increased. By these measures efforts have been made to develop animal production: bacon, fats, meat and meat products. A decree was made regulating the production of bacon in Poland; by another decree the trade in fertilisers was further regul-

ated. Measures were also taken for remedying the financial position of agriculture. It was a question of opposing ill-considered measures of distraint directed against the farmers, especially in respect of short term debts; of suspending distraint on standing crops; of protecting farmers, whose resources had been weakened by the crisis, against ill will and usury. The conversion of debts was even under consideration.

It has been noted that the fall in prices of agricultural products was more marked than that of industrial products. The consequence of this has been the increase in the indebtedness of the farmers, which from 4,000,000,000 zlotys on 1 January 1931 rose to 4,600,000,000 on 1 November 1932.

In LITHUANIA, the net return strengthened in 1929-30, the gross return remaining the same, and farm expenses decreasing somewhat especially in respect of the expenditure on purchases of concentrated stock feeds.

In 1930-31 cattle production decreased and beef prices fell. The gross return from cropping also decreased, as prices of cereals and other field crops fell. Farm expenses were higher than in the previous year; expenditure for fodder purchases increased, as well as the expenditure on manufactured commodities. The net return lost the advance made in 1929-30.

In 1931-32 the net return fell below zero. There was an evident decrease in the net return of cattle breeding and in that for cereals and root crops, as a result of the poor rye harvests and to partial failure of the winter wheat and clover, and also of the fall in prices. Farm expenses were somewhat lower. Labour costs increased, although wages had fallen, since a larger number of persons were working on the farms. On the other hand, the expenditure for fodder purchases and current expenses somewhat diminished.

The net return from pig breeding, from 1928-29 to 1931-32, remained at the same level. Production and export of bacon were on so large a scale that Lithuania became one of the chief bacon suppliers on the British market, where in 1931 it took the fifth place among bacon exporters, *viz.*, after Denmark, Poland, the Netherlands and Sweden. At the end of 1931, the Lithuanian export was exceeded only by that of Denmark. The price fall in no way checked production which made great progress.

It may be noted that the indebtedness of the farmers increased in 1931. At the end of the year, the total indebtedness of the Lithuanian farmers was 200,000,000 litas, or from 40 to 50 litas per hectare of cultivated land.

In LATVIA, the farming season of 1928-29 was characterised by a depression; the net return fell below zero. In this year as in the preceding there were crop shortages, with the consequence that cereal imports increased by 55 per cent. in 1928 and by 146 per cent. in 1929. While cereal prices remained high in 1928, farm expenses slightly increased. As a further consequence of the crop shortages, apart from the gross return of the cropping, the aggregate gross return will be seen to diminish, with the result that there is a decrease in the net return.

In 1929 the harvests were once more very plentiful. Cereal imports were reduced by one half, labour costs decreased somewhat, as well as general expenses, so that farm expenses were lower than those of the two previous years.

In consequence of the poor harvests, dairying production decreased in comparison with that of 1927, *viz.*, by ·23 per cent. in 1928 and by 17 per cent. in 1929. Pig production declined progressively from 1927 to 1929; a significant fact was that the Government imposed an import quota. In 1929, prices firmed and the gross return from this branch was higher. On the cattle market, supply was stronger than demand; production fell from 1927 to 1930, the price level remained constant. This branch of production is of small importance; the height of the aggregate gross return depends on the success of the dairying industry and of pig breeding, as well on that of crops. For Latvia 1929 was one of the best farming seasons experienced since 1927.

The year 1930 was equally a good season, and the harvests were very abundant. Although farm expenses rose — labour and building materials being dearer than in 1929 — the gross return was higher than that of 1929, and the net return showed only a very small decrease. Dairying production gave a high gross return; pig production increased, and pig prices did not decline. Stock breeding and cropping alike showed good returns.

In 1931 the net return again fell below zero. It may be noted that farm expenses, although increasing, scarcely exceeded the level maintained in 1927. A larger number of workers were employed on the farms, but labour was cheaper; there was no variation in the other expenses, except in respect of purchases of farm materials and implements and of general expenses.

On the side of the gross return however it was quite otherwise. The production of cattle had declined markedly, and the small farmer had turned to pig breeding. Pig production and export were greatly increased but prices had declined and the gross return of this branch of farming could not be maintained. Less milk was produced, and of all the gross returns, that of dairying showed the most decline. Cereal prices fell by half from 1930 to 1931, in spite of the law of 31 July 1930, by the terms of which the Government buys from growers, through the intermediary of the communal administrations of each district area, rye and wheat for breadmaking, at prices fixed in advance. In accordance with this law the free importing of rye and wheat has come to an end. The quantities of home grown rye and wheat which must enter into the manufacture of flour were fixed by a ordinance. A stable price was also assured with the support of the Government to beet growers. The Latvian Government which holds the monopoly of the manufacture of brandy fixed the prices on the basis of the purchase prices of potatoes also fixed by the law. The Saeima, or Parliament, adopted a special law guaranteeing stable prices for butter and pigmeat. It will be of interest to see what will have been gained by these measures in 1932. To avoid the sale by auction of agricultural estates, which might be the result of the complete inability of the small farmers to pay interest on their debts, the Government passed a law. Short term credits were converted into long term credits. This is a question which has attracted the attention of the Government in a number of countries.

In ESTONIA, the situation in regard to profit capacity of agriculture did not change from 1927 to 1929. Gross return, farm expenses and net return remained as before.

In 1930-31, there was a slight diminution in dairying production and a perceptible one in prices of dairy products. Fortunately, the butter export trade expanded and the gross return of dairying production did not undergo a fall proportional to that of the prices and production of milk and derivatives. On the pig market, prices were maintained above the level of those ruling in 1927. In 1930 however the number of pigs fattened in Estonia was 22 per cent. the total fattened in 1927; the export ceased. Cattle production diminished also by 29 per cent., export of cattle by 90 per cent. This branch of exports, as in Latvia, has little importance. On the other hand cereal-growing has considerable importance. Cereal prices, after becoming firmer in 1928, dropped by 26 per cent. in 1930. Fortunately the harvest was abundant. The gross returns from other field crops, including flax, fell by 6.7 per cent. Taking it all round, it is due to the sale of dairy products that the total gross return fell in 1930 by 18 per cent. only, as compared with 1927.

Farm expenses, among them labour costs and the expenditure for fodder purchases, fell also in 1930-31 but in a less degree than the gross return. The net return was falling towards zero.

There was a still further decrease in 1931-32 in the farm expenses (including as in 1930 labour costs and purchases of fodder), but the decrease was less in proportion than that of the gross return, and this time the net return actually fell below zero. As in many other countries the cost of the day's work and the price of concentrated feeds fell.

The gross return from cattle farming diminished after 1930 only to a slight degree: prices were maintained. Production of meat somewhat declined. On the other hand dairying production greatly increased, and the export of dairy products did not slacken. Prices of dairy products however collapsed and the gross return from dairying fell off.

Estonia began to export pigs on a large scale; in index numbers pig export rose from 100 in 1927 to 188 in 1928, to 214 in 1929, fell to 7 in 1930 and rose to 2208 in 1931. This export has largely counterbalanced the price fall, for the gross return of pig breeding fell less considerably than that of dairying production. The gross return of " other branches " (including flax) fell alone to nearly the extent of all the other gross returns put together.

In 1931, the Estonian Government also took measures for relief of the farming class. A law of 10 November 1931 empowered the farmers to convert their short term debts, up to 60 per cent. of the value of the property in land, into long term credits at a lower rate, a part of the interest — two per cent. — being paid by the State. By the law of 19 December 1931 the tax on real property is reduced by 20 per cent. The rye monopoly was retained; the importation of other agricultural products was checked either by means of increase in import dues or by restrictions on volume of imports. The control of exports by the State was strengthened and the rates for transport of the products were reduced. The difference between the prices of products sold and those of commodities purchased by the farmers amounted in 1931-32 to 23.5 per cent. The weighted index of farmers' purchasing power, which was 99 in 1929 fell to 91 in 1930 and to 77 in 1931.

Before passing on, in succeeding articles, to the study of the importance of pig fattening for the earning capacity of farms in the different regions, of farms belonging to different systems of production and to different size classes in the countries under review, the striking features of the agricultural development of these countries may be summarised briefly in respect of 1931, the moment at which the crisis really began to be felt.

In Denmark in 1931 there was a contraction of the production of beef, milk and bacon, egg production was increased and increasing attention was given to sheep farming and to products for which there was more demand than before;

in Overijssel (Netherlands) the production of milk and eggs which could more easily be marketed was developed and there was of some abandonment of stock breeding;

in Switzerland the production of beef was diminished, while that of pig meat and milk was maintained, and there was a tendency to increase cereal and root crop cultivation with State assistance;

in Germany, in Austria and in Estonia, increased attention was given to production of milk and to pig fattening; in Germany the consumption of pig meat increased;

in Norway, the production of beef, milk, pig meat and eggs was intensified, exports being mainly directed towards the United Kingdom;

in Sweden and in Poland farming is directed towards the production of beef and pig meat. Sweden closed the frontier to cattle imports. The British market absorbed a great part of Swedish production of pigs. Poland was able to market pig breeding products in the industrial countries and on the Vienna market. An embargo was placed on import of pigs from abroad;

in Finland, in Lithuania and in Latvia pig breeding became of great importance and also egg production. In both cases the products found a ready market in the United Kingdom.

Wherever there has been a fall in the net return from 1927 to 1931, wages and prices of farm requisites have decreased to a less extent than prices of agricultural products. This is a general phenomenon.

In countries where export facilities have not been great, the production of pig meat has been encouraged by tariffs. The demand in the country has thus come to exceed the supply. This holds good of other important agricultural products.

Neither the marketing facilities for agricultural products, or at least for certain of them, nor the protection afforded by the Governments to the agricultural products which were considered to be the most important, could prevent the effects of the crisis being felt. There has been a shrinkage of the net return, as well as of those other values which depend on the net return, *viz.*, the farming family capital return, the family farm income, the social income, the family labour earnings, none of which have been considered in this enquiry. It even happens that the net return is negative and that the farmer must draw on his family capital to pay the interest on his debts.

In 1931-32 a diminution has been noted in the countries under review of the agricultural products which those countries produce by preference: pig meat in

Denmark, dairy products in Switzerland, cattle in the Netherlands, etc. When we come to examine the results of the farming season of 1932-33, it will be seen that Denmark made an arrangement with the United Kingdom to reduce exports and to take measures to curtail production, and, in 1933, to sell 285,000 tons of bacon only as compared with 384,000 in 1932; that the Swiss Federal Government took measures in 1932 to regulate, improve and contract milk and animal production, to place duties on imported concentrated feeds with the object of lowering consumption and thus, as a consequence, to reduce milk production; that the Netherlands amended the crisis law on imports, entered into negotiations with the countries with which agreements existed, and endeavoured to adapt the production of milk and meat to the export possibilities.

Enough has been said to show the importance for economic enquiries of the figures given by farm accountancy. Their utility will be greatly increased when it is possible to supplement them by the data of the agricultural census and by more far-reaching statistical data.

(*To be continued*).

J. DESLARZES.

AGRICULTURAL CO-OPERATION IN SWEDEN

INTRODUCTION.

The co-operative movement in agriculture, in the modern sense of the word, has been in existence in Sweden since the end of the last century: the earliest co-operative dairies and associations for sale of eggs were established towards 1880, the first co-operative associations for purchase of farm requisites about 1890 and the first co-operative slaughterhouse at the end of the century. On the other hand, with the exception of the national organisation of associations for the purchase of farm requisites, the need for forming central organisations for the whole country for the various types of agricultural co-operative societies was realised in farming circles only in the course of the last years of the crisis, under the pressure of the increasingly difficult economic situation of agriculture. Great success has however attended the endeavours to constitute these central organisations and to increase the membership, and in the space of a few years it has been possible to record results of far more importance than had been obtained previously in the course of decades. There are accordingly good grounds for speaking of a true popular movement in favour of co-operation among the rural population. New national organisations have been set up one after another: in 1932 there were founded the *Svenska Mejeriernas Riksförening* (National Union of Swedish Dairies), *Svenska Ägghandelsförbundet* (Swedish Federation for Egg Marketing), *Skogsägareföreningarnas Riksförbund* (National Federation of Associations of Forest Owners), in 1933 the *Sveriges Slakteriförbund* (Federation of Slaughterhouses of Sweden), in 1934 the *Riksförbundet Svensk Frukt*

(National Federation of Swedish Fruit Growers). In addition, in 1930 a decision of the *Riksdag*, passed at the time of the reorganisation of the activity of the agricultural credit institutions, set up a central organisation for the whole country, the *Svenska Jordbrukskreditkassan* (Agricultural Co-operative Credit Bank of Sweden).

The work of establishment and of reorganisation has been directed by the *Sveriges Allmänna Lantbrukssällskap* (General Agricultural Society of Sweden), founded in 1917. This Society may, since the recent reform of the terms of its constitution, be considered as the leading organisation of the agricultural co-operative movement in Sweden, since its main components are the seven large central agricultural co-operative organisations which are affiliated with it, the remaining members being rural economy societies and individual farmers. The main function of the society is to encourage co-operation in agriculture by every possible means, by education, by inspection and audit, etc. Among other important functions of the Society there should be mentioned the publication of market information, price quotations, establishment of accountancy returns and of business analyses for the Swedish farms, etc.

As will later appear, the agricultural co-operative societies and the consumers' societies in Sweden have established a valuable collaboration from several points of view. There is still however room for a permanent organisation, common to these two types of co-operation and capable of handling the various questions which concern them both; such an organisation will be very probably formed within measurable time.

1. — The Legal Basis of Co-operative Organisations.

The Swedish law at present in force on the constitution of co-operative associations and their activity, *viz.*, the *Lagen om ekonomiska föreningar* (law on associations for economic purposes), dates from 22 June 1911 and contains a complete revision of the previous law of 1895 on the same subject.

The provisions of the law of 22 June 1911 apply to all associations the object of which is the promotion of the economic inerests of their members by obtaining necessaries of life or other commodities for them, selling the products of their activities, building their houses, or finding capital for them (1) or exercising any other activity of an economic character.

The provisions of the law apply equally to any association which, while carrying on commercial or other activity making it necessary to keep trading books, has also some further purpose than that of promoting the economic interests of their members. The law is however not applicable to savings banks nor to sick insurance, to mutual insurance associations or other insurance societies,

(1) Further provisions have been enacted relating to agricultural credit banks formed for the purpose of obtaining working capital for farmers.

nor to societies the object of which is to make loans on a guarantee of mortgage of real property.

The trading name of an economic association must include the word *association* (*förening*), but it must not contain the word *company* or any other term which would lead to confusion or give the idea that the name is really that of a company.

To customers other than its own members an economic association can make cash sales only. This restriction however does not apply to associations which conduct sales with purchasers other than their own members mainly relating to products of the activity of the members or of the association itself. Nor does it apply to associations the object of which is to purchase and sell farm requisites.

The obligations of an economic association are guaranteed by its resources, including all charges due and not paid and any other contributions. Members have the right to assume in addition however, according to the provisions of the law, a personnal liability limited to a certain amount, relating to the obligations of the association. In this case the trading name must contain the words " with personal limited liability " (indicated in Swedish by the initials, m. b. p. a.). For associations, where the members' personal liability is not engaged, the words " without personal liability " should be added, *i. e.*, in Swedish, *utan personlig ansvarighet*, or abbreviated, u. p. a.

For the founding of an economic association, five persons at least must subscribe to the rules, which must be in accordance with the law, and it is their duty to select persons to act on the body administering the association.

An economic association only acquires the status of a corporate body through the formality of registration which is obtained by a request to the prefecture of the province in which are situated the headquarters. A non-registered association cannot acquire rights nor assume obligations, nor appear in court or plead before tribunals and other authorities. If the members of any body administering an association, the members of the association, or other persons, act in the name of the association before it has been registered, all those who have taken part in such action, or who have acquiesced in it, make themselves liable for the resulting obligations, as for a personal debt.

The law grants a fairly free hand to the economic associations in regard to the drafting of their rules and merely requires that there be indicated:

(1) the trading name of the association;

(2) the object of its activities;

(3) the headquarters of the administration;

(4) the share subscription of each member and the manner of making the payments, and whether the members are expected to hold more than one share in the association;

(5) in the case of further contributions, whether ordinary or following on a special decision, the total of these or the sum which they may reach;

(6) in the case in which the obligations are not guaranteed by the resources of the association only, the total of the sum guaranteed by the members on their personal liability;

(7) the sum which will be withdrawn from the annual profits to be paid into the reserve funds, and in the case in which the reserve fund is limited to a certain sum, the figure which it must reach for the charges on the annual profits to cease;

(8) the number of members forming the administration and the period for which they hold office;

(9) the method of control exercised by the administrative body;

(10) the date or dates of the establishment of the balance sheet and whether effected yearly or more frequently;

(11) the number of ordinary meetings;

(12) the method of summoning the meetings and the method in accordance with which other communications will be made to members as well as the time which must elapse between the calling and the holding of a meeting.

An association may accept new members at any time and the approval of their admission rests with the Committee of Administration unless the rules provide otherwise. Applications for admission as well as notice of resignations must be made in writing and signed by the applicant.

As regards the right of members to receive on resignation the shares paid up by themselves, there is nothing to prevent the insertion in the rules of a clause to the effect that these will not be repaid or that they will be repaid only when the finances of the association permit, It is only in the event of the member withdrawing from the association for the reason that a personal liability for its obligations has been introduced, or in similar cases, that he is enabled, apart from any restriction contained in the rules, to regain possession of the share subscriptions paid up.

The general meeting of an association may be ordinary, when it deals with business of a kind recurring each year, or extraordinary, when it is called by the Council of Administration at its discretion for dealing with affairs that do not come before ordinary general meetings or which do not admit of delay. An extraordinary general meeting may also be demanded by the auditors or by at least one tenth of the members, and the rules may even make provision for a proportion less than one tenth for the calling of an extraordinary general meeting. If in spite of a request made in proper form, the Council fails to convene a general extraordinary meeting, it may be convened by the public authorities on the request of the members.

The general meeting of the association elects the Council of Administration as well as the auditors, in accordance with the number prescribed by the rules. These offices cannot be held for more than two years, but retiring officers may be re-elected. Provision may however be made in the rules that the Council as well as the auditors, either *in toto* or partially, may be chosen in some other way than by election by the general meeting.

The Council of Administration represents the association in all its contracts and in all the operations or business effected on its account. Limitations may be imposed on this authority but cannot be registered and remain inoperative as regards third parties who have no knowledge of the same. Certain limitations are however found in the law in respect of the rights of the Council or

of officers to represent the association and of their power to sell or to mortgage the real property of the association, unless expressly empowered to do so by the general meeting or unless such rights are conferred on them by the rules.

Other prescriptions are contained in the law relating to the functions of the Council of Administration and of the auditors, prescriptions which however apply only in the cases in which there is no other ruling.

Amendments to the rules are the prerogative of the general meeting, and can be passed only if the members present are unanimous, or, in the event of opposition, by two consecutive general meetings, of which the one must be an ordinary meeting; and on the further condition that at the second meeting the amendment obtains at least two thirds of the votes of the members present and voting. When the case is one of certain important modifications to be made to the rules, *e. g.*, the increase of the personal liability for the obligations of the association, or the limitation of the right of the members to the assets of the association at the time of its liquidation, provision may be made for a larger majority.

The procedure for liquidation and dissolution of an association is set out in detail in the law. Compulsory liquidation takes place when the membership falls below five, provided that the numbers are not once more raised within the space of three months. The rules may prescribe that when certain conditions occur, the association must cease functioning. Finally if the association has no competent registered Council, the members may request the public authorities to declare that the association should proceed to liquidation.

The question of voluntary liquidation may be decided by the general meeting of the association, on condition that all the members present are unanimous; otherwise the proposal must be adopted by two general meetings, and at the last by at least two thirds of the members present and voting.

2. — Co-operative Organisations for the Purchase of Farm Requisites and for the Sale of Cereals and Seeds.

As already stated, the first local organisations for the joint purchase of farming requisites were established in Sweden in the closing decade of last century. The organisation per province of these local associations began in 1895 and during several years from the beginning of this century associations of this kind (Central Associations) were formed throughout the country. A national organisation common to all the central associations, the *Svenska Lantämnnens Riksförbund* (National Federation of Swedish Farmers) was already constituted in 1904. The rapid development of the movement continued even during the world war, but it had subsequently to weather two very serious crises: that of 1921-23 when large capital sums were lost in the subsidiary undertakings built up by the Federation during the war, and that of 1930-32, when the difficult general conditions of agriculture and the marked decline of the prices of products sold by the Federation involved it in heavy losses. After a process of regeneration

effected with State support and a transformation of the organisation of local associations as well as a reconstruction of the central associations, the movement has not only surmounted the consequences of these crises but has succeeded in recording some important successes, in the course of the last few financial years.

At the present time the Federation includes 20 provincial organisations or central associations, in which are grouped about 700 local associations; all these, the Federation, the local and central organisations alike, have the character of economic associations without personal liability.

In this way some 36,000 members of the farming class are directly linked with the whole organisation. In addition about 60,000 more do business with the associations; in consequence the clientèle includes nearly 100,000 farmers, holding about 1,000,000 hectares of cultivated land, or one fourth of the cultivated area of Sweden. The average per member of the cultivated area is about 14 hectares, showing that the small holders and those of medium-sized farms are the chief supporters of the co-operative movement.

The Local Associations. — Membership is open to any farmer on payment of a share generally fixed at 10 crowns for each hectares of land cultivated by him within the area served by the association. A part of this payment is made in cash and the remainder by a bill of exchange in favour of the association with yearly amortisation of at least one fifth. The association may also resolve to impose an annual contribution which must not however exceed 5 crowns per year and per r ember.

Every member is expected to obtain from the association all his requirements in commodities stocked by the association (feeds, fertilisers, oils, tiles for pipes, twine for harvesting, various technical preparations, etc.). Any member who without special authorisation from the management buys any such commodities elsewhere shall pay to the association as compensation 10 per cent. of the value of the commodities so bought. No member may withdraw from the association till five years have elapsed since his admission, unless he gives up farming his land, in which case resignation may take place two years after admission.

A Committee of Management elected by the general meeting for a period of two years is responsible for the management of the affairs of the association. At the general meeting every member is entitled to one vote per share held by him. He cannot however record votes amounting to more than one fifth of the shares represented at the general meeting and in no case for more than one tenth of all the shares paid up to the association.

In accordance with the terms of constitution there will be transferred to the reserve fund 15 per cent. of the annual profit, and 3 per cent. of the education fund. Out of the remaining sums, the members will obtain a maximum interest of five per cent. on their shares, after which the balance is distributed among them in proportion to the value of the commodities purchased by each of them from the association in the course of the year. No profit nor interest, however, will be paid to a member before he has fully paid up his shares. When the reserve

fund has reached twice the amount of the shares, the general meeting of the association will be able to decide if further allocations to the fund should be effected.

The Central Associations. — Membership is open to local associations of the kind mentioned above belonging to the sphere of activity of the central association, as well as to persons and societies cultivating the land situated in the same area. In many regions of Sweden there are no local associations and the farmers are directly attached to the central association.

Every private member takes part in the association by means of a share of 10 crowns for each hectare of land cultivated by him, every local association by the same sum for each hectare of land cultivated by its members in the sphere of activity of the central association, with however a minimum of two shares. In respect of the part of the shares which has not been paid in cash, a bond will be issued which must be amortised by one fifth at least each year, either in cash or by transfer of the interest or profits accruing to each member.

As security for the bond which is issued by a local association, such association is required to give as security bonds in respect of shares not fully paid up by its members for an amount equal to the bond of the local association.

The central association has the right whenever the Council of Management deems necessary to inspect the administrative activities and the accounts of the local affiliated associations.

As regards the obligation on the part of members to purchase farm requisites, their withdrawal from the central association, repayment of their shares at the time of withdrawal, the same rules apply as in the case of the members of the local associations. At the general meeting of the association which, *inter alia*, appoints the Council of Management which consists of five members, each member has one vote in respect of each of his shares, but no member has the right to more than one fifth of the total number of votes corresponding to the shares represented at the meeting.

At least fifteen per cent. of any profits will, in accordance with the terms of constitution, be allotted to the reserve fund, three per cent. to the general purposes fund and two per cent. to the education fund. Out of the balance members will in the first place receive a maximum of five per cent. for the shares for which cash has been paid, and after this any balance will be divided among the members in proportion to the value of the purchases made by each member from the association during the year. No profit nor interest, however, shall be paid to any member before his shares are fully paid up. When the reserve fund has reached twice the amount of the shares, it is for the general meeting to decide as to the amount of the transfer to this fund.

The central associations during the working year 1 July 1933 to 30 June 1934 showed a total turnover of over 53,600,000 crowns of which about 41 per cent. relate to transactions in cereals, about 29 per cent. to feeds, about 22 per cent. to fertilisers, about 4 per cent. to seeds, and also about 4 per cent. to miscellaneous commodities. At the present time from one fourth to one third of the

total purchases as above in Swedish agriculture are handled by the Central Associations. A constantly increasing amount of the purchases effected by the Central Associations tends to be carried out by the National Federation of Swedish Farmers; this is also true of cereals and other commodities which the central associations are under no obligation to purchase.

The Central Associations from the outset of their activities also undertook to market the farm products of their members, especially cereals; this branch of the movement has been the one that has showed the most rapid advance during recent years. During the financial year 1933-34 the sale of cereals on behalf of members alone represented, as already stated, 41 per cent. of the aggregate turnover of the central associations. These associations also own large grain warehousing premises, with a storage capacity of 1,200,000 quintals.

The function of the *National Federation of Swedish Farmers* is, in common with the central associations, to make purchases, on behalf of its members, and as a rule on commission, of farm requisites, and to act as their agent for the sale of their farm products.

Every trading association registered pursuing objects similar to those of the Federation is eligible for membership. Every member must take one share of 10 crowns, payable in cash at the time of joining the Federation, as well as a supplementary payment of 1,000 crowns for each 100,000 crowns in the turnover of the association in excess of 100,000 crowns. Two-fifths of these latter payments are made in cash, the balance is covered by a bond, which is amortised by the profits to the member association.

Although the central associations are independent bodies, fully responsible for their own business management and administration, they are to a certain degree under the supervision of the Federation. This body has the right in conformity with its terms of constitution to inspect the administrative activities and the accounts of the affiliated associations, as also to lay down rules for securing an effective check and uniform methods in the accountancy, rules which the associations are bound to observe. Every affiliated association must in addition, at the time of the appointment of the trade superintendent, submit its recommendation to the Council of Management of the Federation, which has the right to approve it or otherwise.

Every member is bound to meet, through the medium of the Federation and so far as the Council of Management does not grant exceptions, all his requirements in phosphatic, nitrogenous and potassic fertilisers, in imported stock feeds and in Swedish cake, mixed fodders and other fodder products supplied from Swedish oil mills. The Federation takes a commission of five per cent. as agency charges. The Federation allows a credit for three months for seeds and fodders, and of six months for fertilisers, but if payment is made within a month, a rebate is granted. Any member who does not purchase the products listed above from the Federation is required to make a compensating payment thereto equivalent to ten per cent. of the value of the goods purchased elsewhere. If the purchase has been made with the consent of the Federation, the member is required to pay one per cent. of the value of the commodities by way of commission.

No member may withdraw from the Federation until the expiry of five years from date of admission. As regards the repayment, on the occasion of resignation, of the paid up shares, the rules established by the law on the trading associations already quoted hold good.

The business of the Federation is handled by the Council of Management consisting of seven members elected by the general meeting.

The Council if considered advisable appoints an Executive Committee and if necessary, a member with executive functions. Each affiliated association is entitled to a vote in the general meeting for each share held, but no member will have a right to more than one fifth of the total number of votes corresponding to the number of shares represented at the meeting.

As regards the distribution of profits, if any, and the allocations to the reserve fund, the provisions in force for the Central Association shall apply. During the financial year from 1 July 1933 to 30 June 1934, the aggregate turnover of the Federation amounted to 31,600,000 crowns, and the volume of commodities sold to 3,020,000 quintals. The turnover for fertilisers was 10,800,000 crowns, for feeds 8,300,000, for cereals 5,900,000, and for seeds and other requisites about 600,000 crowns.

The following table supplies further details of the turnover of the Federation during the period 1930-34.

Turnover of the National Federation.

Period	Turnover					
	in crowns	in %				
		Fertilisers	Feeds	Cereals	Seeds	Other commodities
Calendar Year 1930 . .	17,202,569	55 77	35 35	5 76	3 03	0 09
» » 1931 . .	20,089,566	39 01	46.91	11 79	2.19	0.10
Financial » 1932-33 .	25,631,172	42.10	32.47	23.20	1.41	0.82
» » 1933-34 .	31,604,926	38 13	32.41	26.76	1.52	1.20

A very close collaboration in many directions of special importance to farmers by the Federation with the *Kooperativa Förbundet* (Union of Swedish Co-operative Consumers' Societies): *e. g.*, the Federation has leased from the *Kooperativa Förbundet* a superphosphate factory in the neighbourhood of Stockholm. The Federation does not actually administer this factory directly but has let it to the company which owns the four other superphosphate factories in Sweden. This lease is however granted on conditions that prevent the company from making any attempts to effect a price monopoly and which offer to the two great co-operative organisations the means of effective control over price fixing. The result of this action has been to bring about a reduction in the prices of superphosphate, involving a total saving even in the first year of several million crowns by the farmers on their purchases of chemical fertilisers. The collaboration

between these two bodies in this connection has also brought advantages to the Swedish farmer in other directions. As a result these two organisations have been successful in bringing influence to bear on the Franco-German potash syndicate with the result that the syndicate has been obliged to allow lower prices to the Swedish farmers for the potash supplied to them.

The Union of Consumers' Co-operative Societies and the Federation have in addition combined to establish the " Syrafoder " association for the purpose of the joint exploitation of the concession that they have purchased of behalf of Sweden of the famous process for the preservation of green fodder discovered by the Finnish professor, A. J. VIRTANEN, whereby the original proteins contained in the fodders remain unaltered. The two bodies have organised training courses for instructors in the practical application of the process and have provided the equipment required through the co-operative societies for purchase and supply of requisites. In addition the Union of Consumers' Co-operative Societies and the Federation have jointly established a company known as the *Andelskalk*, which has leased a large chalk pit belonging to the State and sells the products to farmers through the co-operative agricultural purchasing societies (1).

H. LINDSTEDT

(*To be continued*).

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(1) It should be noted that the collaboration between the co-operative consumers' movement and the agricultural co-operative organisations is not limited to the examples quoted above. The Consumers' Co-operative Association at Stockholm, which is the largest local co-operative society in the country, having some 75,000 members and a total annual turnover of about 50,000,000 crowns, sold in 1933 in its sale depots the following quantities of certain foodstuffs delivered directly by the producers' societies: 13,000,000 litres of milk, 2,200,000 kg. of eggs, 4,400,000 kg. of potatoes, and about 6,000,000 kg. of meat. Among the many other examples there may be mentioned: the *Mjölkcentralen* at Malmö, the third largest town in the Kingdom. This central organisation is the property of the consumers' co-operative association of the town and of the dairy farmers of the surrounding country. On the Council of Management the consumers and producers have equal representation. One third of the profits is assigned to the producers, one third to the consumers and the remaining third is retained by the organisation and goes to build up the capital. This body has aroused very general interest even outside Sweden. Thus at Geneva a Milk Central has been established on the model of the similar institution at Malmö.

The following facts will serve as an example of the importance of the consumers' co-operative movement from the point of view of the farming class. Of the 550,000 households representing a full third of the population of Sweden who in 1934 were members of the local association affiliated to the " Kooperativa Förbundet, " about 80,000 were farm households, and about 22,000 were households of farm workers, that is to say, in all about one fifth of the total number of members affiliated to the consumers' co-operative societies. The total number of the sales effected by the associations affiliated to the " Kooperativa Förbundet, " representing about 90 per cent. of all the existing local consumers' societies amounted in 1934 to 377,000,000 crowns. The turnover of the " Kooperativa Förbundet " during the same year amounted to 165,000,000 crowns and the total value of the output of the affiliated productive enterprises was 92,000,000 crowns. The factories belonging to this Union include the following:

LAW ON AGRICULTURAL SETTLEMENT IN CHILE

The Republic of Chile consists, as is well known, in a zone lying on the south-west of the American continent, 4,300 km. in length from N. to S., and varying in width between 100 and 430 km., the total area being 757,366 km² (289,300 sq. miles circa). At the southern extremity the land is split up into an archipelago, the principal islands being Chiloe and Tierra del Fuego.

On the basis of the figures for the area devoted to agriculture, it would not be possible to claim that Chile is an eminently agricultural country. Actually of the total area, 757,366 square kilometres, 87,300 only are utilised for agriculture and 125,000 are to a moderate extent utilisable.

The following table shows the distribution of these agricultural areas, the zones in which they are situated and the types of cultivation predominating.

Areas fully utilised for agriculture.

(In square kilometres).

Zones	Total area of zone	Irrigated land	Dry farming	Total area under cultivation
Desert	271,218	300	—	300
Transitional	49,072	1,500	—	1,500
Central	100,898	10,000	—	10,000
Southern	108,104	500	65,000	65,500
Patagonia	228,074	—	10,000	10,000
	757,366	12,300	75,000	87,300

one margarine factory, one oil mill, two large flour mills representing about one fifth of all milling carried out in the large and medium-sized mills of Sweden; one boot and shoe factory, two rubber factories, one chemical products factory, one cash register factory, a number of coffee-roasting plants, establishments for the preparation of different kind of groats, flakes and Swedish crisp breads, etc. In addition the " Kooperativa Forbundet " initiated the movement for the establishment of the " Nordiska Andelsforbundet " (Co-operative Federation of the Northern Countries), a joint importing agency for the Central Co-operatives of the three Scandinavian countries and Finland. It was also the prime mover in establishing the Luma factory which manufactures electric lamps and now also is the property of the four Central organisations referred to above. In the course of its efforts of the " Kooperativa Forbundet " to overcome all tendencies in the direction of monopoly, a purpose which has inspired all the activities of the affiliated factories, this Union has been highly successful and in a way which has proved of the utmost value for the agricultural population alike in its capacity as producer and as consumer. Space does not permit of any more detailed examination of this question, nor of that of the other branches of activity of the " Kooperativa Forbundet ", very important from the standpoint of the national economy,

Lands moderately utilisable for agriculture.

(In square kilometres).

Zones	Total area of zone	Utilisation for agriculture		Total area under cultivation
		Dry farming	Stock farming	
Desert	271,218	—	—	—
Transitional	49,072	5,000	—	5,000
Central	100,898	60,000	—	60,000
Southern	108,104	—	—	—
Patagonia	228,074	—	60,000	60,000
	757,366	65,000	60,000	125,000

If the total of lands moderately utilisable for agricultural purposes, *viz.*, 125,000 km²., are added to the total of lands which are clearly fertile, 87,300 km²., a total area is obtained of 212,300 km²., a total which does not, as already noted, give the country a definitely agricultural character.

At the same time the majority of the population is engaged in agriculture, and agricultural production not only meets the requirements of the nation but also leaves a wide margin for exportation. The anomaly here presented is due probably to the distribution of the population; out of a population of 4 500,000 inhabitants, 80 per cent. are absorbed by the zones of agricultural production, and for this reason, although taking the Republic as a whole the agricultural character seems to be disproportionately slight, yet owing to the distribution of the population Chile is reckoned among the definitely agricultural countries.

A brief comment may now be made on the figures of the two preceding tables.

The desert zone includes the provinces of Tacna, Taiacapa, Autofogasta and Atacama, zones almost completely sterile except for a small part of Atacama, where about 30,000 hectares of irrigated land are cultivated. The zone of transition includes the provinces of Coquimbo and Aconcagua, in this zone which is also characterised by sterility there are on the coast some areas of irrigated cultivation in all about 150,000 hectares, and it includes also some 500,000 hectares which can be utilised during a short period of the year as spring pastures and for dry farming in small parcels. The Central zone which includes the provinces of Valparaiso, Santiago, O'Higgins, Colchagua, Curico Talca, Linares, Maule, Nuble, Concepción and Biobio is the most agricultural of all Chile and includes 1,000,000 hectares of irrigated lands and 6,000,000 hectares of dry farming. In the southern zone which includes the provinces of Arauco, Malleco, Cautin, Valdivi and Chiloe there are 50.000 hectares of irrigated land and 6,500,000 of extremely fertile land which is at present hardly cultivated at all and which is the main objective of the land settlement scheme of the new law to be described here. The zone of the Magellan Straits, although not unsuitable for agriculture

has been up to now neglected, but will be dealt with under the law in question, which makes provision for the irrigation of 100,000 hectares and for bringing another 6,000,000 under stock farming.

The crops of Chile are those of the temperate zone; in the extreme north only certain tropical crops are grown but to a limited extent only. The main agricultural products are cereals, vines, and in irrigated belts, fruit trees. The most recent statistics give the following figures of production: wheat, 9 000,000 quintals: barley 2,000,000· maize 500,000; oats about ·400,000 quintals. The most important cultivation is probably vine growing and it is estimated that in Chile there are some 64,000 hectares of vineyards and a production of 2,200,000 hectolitres of wine of the first quality and of 1,100,000 hectolitres of wines of inferior quality. As regards live stock, in round figures there are in Chile 4,500,000 sheep, 2,000,000 cattle, 1,000,000 horses and mules and 500,000 goats and pigs.

The main source of wealth in Chile up to the last ten years was constituted by its deposits of nitrate of soda in the desert zone. The yield from these deposits was so large that during the period at which it was at its height it was calculated that the deposits in actual working would have been sufficient to maintain for a century the annual export of 25,000,000 quintals of a value of 240,000,000 gold pesos, which was the record export of 1910; and this without having recourse in any way to new deposits. It was owing to the competition of sulphate of ammonia that Chile lost the leading position which it had so long held and the seemingly inexhaustible source of wealth represented by the product diminished till now it represents an asset greatly reduced in importance (1).

It is this fact which has completely changed the economic structure of Chile and has compelled the legislator to seek in new directions the possibility of restoring normality in the trade balance of Chile so abruptly dislocated by the disappearance of practically the whole revenue from nitrate. In order to recover equilibrium recourse is had to agriculture and to the intensification of production with a view to securing a revenue that will replace that which has been lost and to establishing on the land a body of small holders from among those who, during the period of national prosperity, left the country for the towns.

The essential facts of the economic geography of Chile have been set out here so as to make clear the position in advance of the promulgation of the important law on agricultural settlement which will give a fresh orientation to the national life. The law itself may now be studied.

The Law on Agricultural Settlement. — On 15 February 1935 the law on agricultural settlement No. 5604 was promulgated after approval by the National Congress This law was anxiously awaited by a large section of the popu-

(1) See in this connection the article published in the *Monthly Bulletin of Agricultural Economics* January and February 1935, pp. 1 to 16 and 55 to 77, prepared by C. KAPPSTEIN.

lation which is manifesting a legitimate desire to return to the land in order to make its contribution in that way to the national progress.

This law which had been the object of prolonged consideration by the Government was enacted at an historic moment for the Nation. After ten years of revolutionary periods and experiment in different types of government a normal period had been reached in which it became possible to give attention to a problem of national importance such as was the definite introduction of agricultural settlement, intended to mark the beginning of a new era of development in the economic and social conditions of Chile.

The law, the main outline of which will be given here together with a brief commentary, is complete and presents the character of a true agrarian reform. It establishes in the first place a National Bank of Agricultural Settlement (*Caja Nacional de colonización agrícola*), a supreme self-governing institution constituted as a corporate body and placed in charge of Chilean land settlement; it then enunciates the principles that are to govern the future application of agricultural technique, credit and co-operation, in fact, of all activities relating to agriculture.

No attempt will here be made to analyse the text of this voluminous piece of legislation. The account given of its general spirit and of the changes introduced by it will be however sufficient to enable the reader to judge with some precision of the achievement in this respect of the Chilean Government.

Confining the examination to the essence of the law, it will be noted, as already stated, that the Bank of Agricultural Settlement is established with the function of making settlements on the State lands or on those of private persons, when requirements of the community as a whole shall make necessary their incorporation in such a way as to secure more effective production. Through the medium of its technical bureau, the Institute will proceed to the parcelling and subsequent formation of lots on the lands on which settlement is contemplated in order to place new settlers thereon. Once these are re-established on the land, the Institute will issue carefully prepared instructions to these new farmers with a view to intensification and industrialisation of production with the help of centres of agricultural organisation. It will encourage the co-operative spirit among the settlers, while credit, as well as all other measures required for success in co-operation will not be neglected.

In assigning to the *Caja de colonización* these functions of prime importance, the law proceeds to fix the capital at 100,000,000 pesos to be paid over by the State Treasury in four annual instalments of 25,000,000 each. It further prescribes the investment of these funds, assigning the greater part, or 50 per cent., to the purchase and working of lands situated in the southern zone of the Republic (the *zona Magallanica*). This is a very extensive zone of *latifundia*, and consequently in special need of settlers prepared to work hard so as to bring under cultivation wide tracts of land that by lapse of time and neglect have become overgrown with scrub to the destruction of all proper cultivation. These lands have so far escaped the initiative of the private settler, and funds have not been available to transform them into the storehouse of wealth which this zone of exuberant vegetation may certainly become.

The administration of the Bank is placed in the hands of a Council of Management, composed of a president nominated by the President of the Republic, the Director of Land and Lands Settlement, the Director of the Bank itself, three representatives of the settlers and one representative for each of the nine most important agricultural institutions of Chile, *viz.*, the Northern Agricultural Society, the National Society of Agriculture, the Southern Agricultural Society, the Co-operative Society and Agricultural Society of Temuco, the Agricultural and Stock-farming Society of Osorno, the Chilean *Sociedad agronómica* and the *Federación Agronómica Nacional.*

In regard to purchase of lands, the law declares finally in article 21 that "there shall be declared of public utility and accordingly liable to expropriation all lands required by the Government for its purposes of land settlement." The purchase price of these lands will be fixed on the basis of the valuation made by the experts nominated by the Bank; mortgage charges burdening the lands to be purchased must be stated and paid off before expropriation. As soon as the valuation is made by the experts, the Bank may take possession of the lands, first depositing in the Treasury the amount of the said valuation; the purchaser (the Bank), and the seller if they are not in agreement with the valuation by the experts, alike have the right to appeal to the courts of law within a period of 20 days. After the lapse of that period the Bank notifies the owner that it takes possession of the lands; and against this decision there is no appéal.

The lands purchased will be divided into lots of an area which will vary in accordance with the situation; the following may be taken as examples of these variations:

	Maximum limit of size of lots ha.	Minimum limit of size of lots ha.
Rio Nuble (northern zone)	30	4
Rio Nuble (southern zone)	100	20
Dry farming zones	500	50

The total price which will be assigned to each parcel on the basis of the valuation made by the experts and taking into account the improvements, or work of any kind, that have been carried out on it, will be paid in instalments to which will be added the one per cent. of amortisation. The total sum will bear an interest of 4 per cent. Payment of these annual instalments will begin from the second farming season, unless it is a case of commercial crops when, in view of the higher expense involved in their cultivation, payment will begin after the lapse of four years. In all cases additional amortisation payments may be made up to the total amount of the debt. The legal title to ownership of a parcel in favour of a settler to whom the land has been assigned will be granted by the Bank only when he shall have paid the fifth part of the fixed price, if the land responds well to farming, or a tenth part, if the case is one of land requiring special attention. Settlers whose payments are in arrears will pay 7 per cent. interest on the arrears, and in the event of prolonged failure to pay they will lose the

claim to ownership and will be withdrawn from the land, after repayment in full of all payments they may have made.

A settler in order to acquire land in ownership must:

(*a*) be married;

(*b*) be between the ages of 20 and 60 years;

(*c*) have good health and a good character;

(*d*) not possess any other rural property of value equal to or higher than that of the parcel in question.

In the case of a settler of over 60 years of age a parcel may be acquired in ownership, in spite of the provision to the contrary just stated, if he has health and strength to work and if he has a son at least 17 years old. As exception the clause excluding non-married persons from the holding of lots in ownership, widowers with families may be admitted provided they conform to the remaining requirements.

The law further indicates an order of preference for the acquisition of lands, in accordance with which preference will be given among the candidates to·

1. persons who show that they have special experience in the type of farming which it is intended shall be mainly carried out on the settlement in question:

2. persons holding the certificate of " agrónomo, " or proving their competence in farm work by means of certificates obtained at institutions of agricultural instruction;

3. persons showing that they have habitually worked on the land;

4. the best qualified among those who have attended schools of agriculture:

5. public and private employees who are without employment and who fulfil the requirements of the law, as regards civil status, age, etc.;

6. all Chileans, resident abroad and possessing the required qualifications as to age, etc., who express their intention of returning to their country in order to go on the land;

7. fathers of families.

In addition there is established in the law an order of preference within the respective classes of candidates for settlement lots, such preference being given to unemployed persons. This preference is due to the general situation in Chile, as very high unemployment figures are now reached in the large towns. This is to a great extent due to the numbers of former farm workers who have left the land and found their way into the towns where, now that the epoch of the nitrate prosperity is over, they have only rendered life more difficult for the industrial population and swelled the unemployment statistics. It is in fact towards the restoration to the land of these masses that the majority of the provisions of the law are directed; *viz.*, towards the creation of a class of small holders from an element which comes originally from the land and left it under pressure of circumstances – while at the same time the object is to bring under cultivation zones of high productivity.

The new settler is not left to chance in his fresh avocation; the law makes provision for the technical and practical training of the settlers by experts, to be carried out on experimental farms. Under art. 56 of the law the *Caja Nacional de colonización agricola* will acquire in the different zones of Chile farmlands, with a view to their being worked, under its own administration, by persons wishing to qualify as settlers, and used as schools for the training, selection and specialisation of future settlers. These lands will be placed in charge of an Agronomic Section, and will be equipped with the improvements required for better farming, with machines and all farming requisites, with live stock and all the plant essential to satisfactory stock farming. All buildings required for the future settlers will also be provided. Every candidate will have the right to farm on his own account and for his own benefit, with the means placed at his disposal by the Bank, a small plot of land by preference attached to his dwelling house, while at the same time he will continue to perform the collective work expected of him.

For the purposes of the law, these candidates will be regarded as farm workers, and they will be required:

(*a*) to be of Chilean nationality and married;

(*b*) to be not more than 50 years of age;

(*c*) to bear a good character and to enjoy health compatible with performance of work.

In each settlement school, a balance sheet is established every year with a view to ascertainment of profits or losses. If the accounts show a liquid profit, that is to say, if, after deducting from the net return, or gross profit, the interest payable on the capital and the amortisation payments due, there should remain a " liquid " profit, this is to be distributed between the management of the settlement school, the employees and the candidates undergoing training.

Co-operation as applied to land settlement. — In the purchase of lands by the Bank of Agricultural Settlement for the formation of settlements, in the parcelling of these and assignment of parcels to new settlers, each settlement is regarded as automatically constituted as an agricultural co-operative society in conformity with the special rules enacted on the subject. Co-operative societies thus constituted will enjoy all the advantages given by the legislation in force to societies of this type. They are under the supervision of a manager appointed by the Bank, a supervision which will come to an end when the co-operative settlement ceases to be a debtor of the Bank, that is to say, when the settlers on such settlement have made the final payments for their parcels.

This co-operative system applied to the settlements includes all branches of co-operation: purchases, sales, obtaining of fertilisers and seeds, joint utilisation of machines, etc.

Up to the present time there has been practically no recognition in Chile of the importance of the co-operative factor for the progressive development of agriculture and stock farming. This has been due to the inequitable conditions of land tenure and to the egoistic spirit found among both large and

small farmers and their consequent inability to understand the positive results to be obtained from co-operation. Once the settlements are constituted, formed by rapidly expanding groups of peasants, co-operation under its different forms will give its full results, and will undoubtedly prove to be the most effective and suitable method of farming.

Financing of the Settlements. — The law on land settlement finally deals with the question of credit. In addition to the capital of 100,000,000 pesos which form the endowment of the *Caja de colonización*, the law empowers the President of the Republic to issue every year an internal loan of 300,000,000 pesos at a rate of interest not exceeding 6 per cent. and with an annual amortisation not less than one per cent.

The administration of the funds derived from this loan will be directly and exclusively in the hands of the *Caja de colonización* which will devote them to the purposes of land settlement as defined by the law.

E. MARTINEZ DE BUJANDA.

PUBLICATIONS RECEIVED BY THE LIBRARY

Books.

General.

HOUILLIER, F. L'organisation internationale de l'agriculture. Les institutions agricole internationales et l'action internationale en agriculture. Paris, Librairie technique et économique, 1935, XIV, 305 p.

Sociology.

ALVARO, C. Terra nuova. Roma, Istituto nazionale fascista di cultura, 1935. 66 p. (Testimonianze).

GANGULEE, N. The Indian peasant and his environment. (The Linlithgow commission and after). London, Oxford university press, 1935, XXVI, 230 p.

KOLLNIG K. Bauerntum vor den Toren der Grosstadt. Mannheim-Seckenheim, Zimmermann, 1935, 50 p.

Political Science.

PAPERS AND PROCEEDINGS OF THE SIXTH ANNUAL MEETING OF THE CANADIAN POLITICAL SCIENCE ASSOCIATION, v. VI. Montreal, Que. May 1934: Kingston, Ont., The Jackson press, [1934], 284 p.

WHEELER-BENNETT, J. W. Documents on international affairs 1934. London, Oxford University Press 1935, XVI 546 p.

Economics.

MILANO. UNIVERSITÀ CATTOLICA DEL SACRO CUORE. Problemi fondamentali dello Stato corporativo. Corso di lezioni promosso dalla Università cattolica del S. Cuore col concorso della Unione cattolica per le scienze sociali. Milano, « Vita e pensiero », 1935, XII, 162 p. (Pubblicazioni, serie 3. a: Scienze sociali, v. 14).

PALESTINE ECONOMIC CORPORATION. 8th Annual report, calendar year 1934, s. l. n. é., [1935].

TÖNDURY, H. Die kommende Wirtschaft. St. Gallen, Fehr., 1934. 68 p. (Veröffentlichungen der Handelshochschule St. Gallen, hrsg. von P. Keller und E. Gsell. Hft. 8).

Statistics.

CANADA. BUREAU OF STATISTICS. 7th Census of Canada, 1931. Census of agriculture. Ottawa, Patenaude, 1934, [v. 7]. Prince Edward Island. 1934, 43. [Text in English and French].

Rural Economics.

BRIZI, A. Compartecipazioni agrarie e contadini partecipanti in Campania e in Lucania. Roma, Soc. an. tip. operaia romana, 1935, 199 p. (Istituto nazionale di economia agraria. Studi e monografie, n. 15).

LA MEDICA, V. I problemi dell'agricoltura in Capitanata. Foggia, Dauno, [1934] XVI, 95, p.

LO BIANCO, A. Agraria generale ed economia agraria corporativa. Guida pratica per ingegneri e periti agrari, agrimensori, geometri, agricoltori, ecc. Milano, Hoepli, 1935, XVI, 197 p.

PANT. S. D. The social economy of the Himalayans. London, Allen & Unwin, [1935], 264 p.

PETROCCHI G. La piccola impresa ortiva irrigua nell'Agro nocerino e nell'Agro di Castellammare di Stabia. Roma [Soc. an. tip. operaia romana, 1935]. 85 p. (Istituto nazionale di economia agraria. Studi e monografie, n. 22).

Agricultural Policy.

UCKER, P. Die italienische Agrarpolitik seit 1925 unter besonderer Berücksichtigung des « Kampfes um das Getreide » Aarau, Sauerländer, 1935. XIX, 182 p. (Schweizerische Beitrage zur Wirtschafts-und Sozialwissenschaft. Hft. 2).

Town Planning.

SCHRÖDER, J. Die Möglichkeiten der Nebenerwerbssiedlung im rheinischwestfälischen Industriebezirk. Münster (Westf.), Wirtschafts-und sozialwissenschaftlicher Verlag, 1935. 106 p. (Münster (Westph.). Universität. Forschungsstelle für Siedlungs-und Wohnungs wesen. Materialien-Sammlung, Bd. 13).

Co-operation.

HALL, F. and W. P. WATKINS. Co-operation. A survey of the history, principles, and organisation of the co-operative movement in Great Britain and Ireland. Manchester, Co-operative union, 1934. 408 p. (The Co-operative union, ltd.)

Credit.

LUZ FILHO, F. Cooperativismo e credito agrícola. 3ª ed. S. Paulo, Livraria académica [1935]. 551 p.

UNION OF SOUTH AFRICA. COMMISSION TO INQUIRE INTO CO-OPERATION AND AGRICULTURAL CREDIT. Report. Cape Town, Cape Times, 1934. IV, 207 p.

Trade.

BOMBAY. COMMITTEE ON THE IMPROVEMENT IN THE MARKETING OF FRUIT AND VEGETABLES IN THE TOWN OF BOMBAY. Report of the Committee on the improvement in the marketing of fruit and vegetables in the town of Bombay, 1934. Bombay, Govt. central press, 1935. II, 113 p.

CANADIAN GRAIN TRADE YEAR BOOK 1933-34. v. XIV. Winnipeg, Sanford Evans statistical service, [1934]. 106 p.

Industry.

ANNUAIRE INDUSTRIEL. Répertoire général de l'industrie française. IIème édition. 1935. Paris, « L'annuaire industriel », 1933. 2 vols.

Various.

ANNUAIRE DES BIBLIOTHÈQUES 1935. Un choix parmi les meilleurs livres de l'année avec comptes rendus critiques. Publié sous la direction de M. CHARLES DEPASSE. Liège, « Biblio », 1935. 231 p.

Periodicals (1), (2), (3).

AGRONOMJA społeczna i szkolnictwo rolnicze. v. 3, 1933. mens. Warszawa. Zł. 12. (Centralne towarzystwo organizacyj i kółek rolniczych w Warszawie). [Social agriculture and agricultural education (central society of the rural organisations in Warsow)]. [From 1933 to 1935 under the title of: « Agronomja społeczna »].

ARCHIVES et bibliothèques. nº 1, 1935. bimestr. Paris. 50 fr. int.; 55 fr. étr. (Libr. E. Nourry).

ARKHIV za stopanska i sotsialna politika. Archiv für Wirtschafts und Socialpolitik v. 10, 1935. bimestr. Sofia. Lewa 100. int.; Lewa 200. étr. [Text in Bulgarian].

ASSICURAZIONI. Rivista di diritto, economia e finanza delle assicurazioni private. v. 1, 1934. bimestr. Roma. Lit. 80 int., Lit. 120. étr. (Istituto nazionale delle assicurazioni). [Summaries of the articles in French, English and German].

BOLETÍN mensual de estadística agrícola. v. 9 1934. Mexico. (Dirección de economía rural. Secretaria de agricultura y fomento). [Formerly: « Boletín mensual del Departamento de economía agrícola ».

BOLLETTINO dell'Istituto italiano per il medio ed estremo oriente. v. 1, 1935. mens. Roma. L. 30 int.; L. 45 étr.

BULLETIN of the World economic archives of Hamburg v. 1, 1934. bimens. Hambourg. (Hamburgisches Weltwirtschafts-Archiv).

COLONY of Southern Rhodesia government gazette. v. 13, 1935, hebd. Salisbury.

COMMONWEALTH of Australia gazette. 1935 irr. Canberra. L. 1. 10s 4d. (Commonwealth government printer).

COTTON literature, selected references. v. 1, 1931. mens. Washington (U. S. Department of Agriculture, Library).

ETUDES sociales. v. 55, 10ème s., 1935. mens. Paris. 40 fr. int.; 50 fr. étr. [Cumulating « La Réforme sociale » and « La Science sociale »].

IZVESTIIA na Balgarskata zemedelska i kooperativna banka. Bulletin de la Banque agricole et coopérative de Bulgarie. v. 1, 1935. trim. Sofia. [Text in Bulgarian; contents in Frénch also]. [Cumulating: « Izvestiia na Balgarskata zemedelska banka » and « Izvestiia na Balgarskata tsentralna kooperativna banka »].

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(1) Previous list June 1935. To be continued December 1935.

(2) List of abbreviations: bihebd. (biweekly); bimens. (twice monthly); bimestr. (every two months); déc. (every ten days); étr. (foreign price); f. (copy); hebd. (weekly); int. (home price); irr. (irregular); mens. (monthly); nº (number); N. S (new series); p. a. (per annum); q. (daily); sem. (half yearly); s. (series); trihebd. (every three weeks); v. (volume); trim. (quarterly).

(3) Between brackets [/] are given translations and explanatory notes not appearing in the title of the review.

NARODNO blagostanie. v. 7, 1935. hebd. Beograd. D. 280. int. Frs. 40 étr. [Supplement annexed]. [Public welfare].

NUOVO Stato. v. 1, 1932. bimens. Roma. L. 30 int.; L. 42 étr.

ORGANISACE. Zprávy Československého nàrodniho komitétu pro vědeckou organisaci. Bulletin du Comité national tchécoslovaque de l'organisation scientifique v. 7, 1934. mens. sauf Juillet et Août. Praha. Kč. 40. [Title in German and Eglish also]. [Farmerly: « Zprávy Československého nàrodniho komitétu pro vědeckou organisaci »]. [Organisation].

QUARTERLY journal of statistics. v. 1, 1935. trim. Nanking. (Directorate of statistics. Directorate-General of budgets, accounts and statistics. National Government of China). [Formerly: « The statistical monthly »]. [Text in Chinese; contents and headings in English also].

QUESTIONS pratiques de droit industriel et commercial et d'économie sociale. n. s. 1934. trimestr. Paris. 40 fr. int.; 50 fr. étr. [Formerly: « Recueil de droit commercial et de droit social » cumulating from 1929 to 1933, « Questions pratiques » and « Recueil de droit commercial »].

RIVISTA italiana di scienze economiche. v. 7, 1935. bimestr. Roma. L. 50 int.; L. 75 étr. [Formerly: « Rivista italiana di statistica, economia e finanza »].

STATISTIQUE mensuelle du commerce extérieur de l'Indochine. 1935. Hanoï. (Administration des douanes et régies. Bureau de statistique commerciale).

ZEITSCHRIFT für osteuropäisches Recht. n. s. v. 1, 1934 mens. Berlin. RM. 48. (Carl Heymanns Verlag).

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In the press:—

ANNUAIRE INTERNATIONAL DE LÉGISLATION AGRICOLE

VOL. XXIV, 1934

FRENCH EDITION ONLY

This volume, published in French of about 1000 pages 8vo contains the text of the more important laws and decrees affecting agriculture; the laws and decrees of secondary importance are carefully listed with title, date of promulgation, number, official source, etc. The *Annuaire* is prefaced with an analytical introduction summarising the laws and decrees published in the volume and showing the trends of Agricultural legislation during the year 1934.

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TABLE CHRONOLOGIQUE PAR PAYS – TABLE ALPHABÉTIQUE PAR MATIÈRE.

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MONTHLY BULLE[TIN]

OF

AGRICULTURAL ECONOMICS AND SOCIOLOGY

1935 No. 10

MEAT IMPORTS AND THE LIVESTOCK INDUSTRY IN THE UNITED KINGDOM

Until a few years ago, the live stock industry in the United Kingdom had to compete against the free and unrestricted importation of chilled and frozen meat (1) both from British Dominions and from foreign (principally South American) countries, as well as the importation of live animals from the Irish Free State and Canada. The seriousness of this competition is indicated by the table on page 354 showing the imports of meat in the twelve months ending 30 June 1932.

In addition to the imports shown in the above table there were small imports of other kinds of meat as well as imports of live cattle (mainly from the Irish Free State), and of sheep and lambs (exclusively from the Irish Free State). The number of cattle imported was 169,538 in July-September 1931; 278,138 in October-December 1931; 183,506 in January-March 1932, and 139,405 in April-June 1932, making a total of 770,587 in 1931-32. The number of sheep and lambs imported was 256,796 in July-September 1931; 133,887 in October-December 1931; 58,928 in January-March 1932, and 147,088 in April-June 1932, making a total of 596,699 in 1931-32.

It will be seen from this table that the chilled beef supplies represented a much larger volume of meat than the supplies of any other type of meat imported and that they came almost exclusively from South America, mainly from Argentina. On the other hand, as regards mutton and lamb, the United Kingdom was drawing nearly three fourths of its supplies from British countries mainly Australia and New Zealand, the latter being the largest supplier, especially of lamb. Furthermore there was—though it is not apparent from the table—a strong movement in Australia for developing the exportation of beef, chiefly in the form of frozen beef, though some experiments had already been made in the shipment of chilled beef.

When, in 1932, the United Kingdom abandoned its traditional policy of free trade, the live stock industry obtained no benefit from the new protective measures, as meat was expressly exempted from the duties imposed by the Import Duties Act. Incidentally, a small measure of protection was afforded

(1) In this article, pig-meat, unless expressly stated, in not included.

to the industry when, for reasons lying outside the scope of this article, the British Government imposed an *ad valorem* duty of 20 per cent. on imports from the Irish Free State of live animals for food and meat of all kinds. This duty came into operation on 15 July 1932, and on 15 November 1932 it was increased to 40 per cent. on live animals and to 30 per cent. on meat. In April 1933 specific duties were substituted for the *ad valorem* duty on live cattle for food and in the following month for the *ad valorem* duty on sheep and lambs. To some extent the effect of these duties was counteracted by export bounties offered by the Government of the Irish Free State.

TABLE I — *Imports of Meat and Live Animals in 1931-32.*

PERIOD	Australia	New Zealand	Uruguay	Argentina	Other countries
	cwts	cwts	cwts	cwts	cwts
Chilled Beef					
July-Sep 1931	—	—	174,175	1,918,220	(1) 153 901
Oct-Nov »	—	—	125,971	1,984,485	(1) 3,798
Jan-Mar 1932		—	152,206	2,001,612	(1) 131,012
Apr-June	—	—	156,578	1,781,588	(1) 261,822
Total (1931-32)		—	608,930	7,685,905	550 533
Frozen Beef					
July-Sep 1931	438,098	70,753	41,100	110,419	70,933
Oct-Nov »	368,868	165,950	64,262	182,163	47,304
Jan-Mar 1932	166,638	51,853	49,660	199,795	37,886
Apr-June »	156,426	88,642	42,940	119,312	31,851
Total (1931-32)	1,130 030	377,198	197,962	611,689	187,974
Frozen Mutton and Lamb					
July-Sep 1931	271,618	1,149,598	18,797	315,738	73,465
Oct-Nov »	722,238	538,061	66,695	289,560	12,909
Jan-Mar 1932	315,071	790,930	75,434	439,355	16,418
Apr.-June »	181,174	1,429,465	35,839	351,440	(2) 250,251
Total (1931-32)	1,490,101	3 908,054	96,765	1,396,093	353,043

(1) All these imports were from Brazil.

(2) Including imports of 248,450 cwts from Chile.

Already in 1932 the live stock industry was in a severely depressed condition. The averages prices of English beef and English mutton in each month from July 1931 to June 1932 are shown in the following table.

TABLE II. — *Prices of English Beef and English Mutton in each month from July 1931 to June 1932 (shillings per cwt.).*

		Beef	Mutton
July	1931	86s. 4d.	108s. 3d.
August	»	79s. 4d.	98s. 0d.
September	»	72s. 4d.	93s. 1d.
October	»	72s. 4d.	86s. 7 ½d.
November	»	67s. 8d.	80s 6d.
December	»	70s. 0d.	77s. 5 ½d.
January	1932	72s. 4d.	78s. 9d.
February	»	74s. 8d.	77s. 5 ½d.
March	»	77s. 0d.	77s. 11d.
April	»	79s. 4d.	77s. 10d
May	»	79s. 4d.	77s 0d.
June	»	84s 0d.	79s. 9d

In view of this state of depression it was deemed advisable to take measures for regulating the imports of meat, whether from foreign or Dominion suppliers.

An opportunity of doing this arose when the Economic Conference of the British Empire was held in Ottawa in July and August 1932. At that Conference a series of agreements was made between the United Kingdom and the various British Dominions. In so far as those agreements related to meat, the policy of the Government of the United Kindom was stated to be, first, to secure development of home production and, secondly, to give to the Dominions an expanding share of imports into the United Kingdom.

Under the Ottawa Agreements between the United Kingdom and Australia and between the United Kingdom and New Zealand, the following undertakings were given in respect of the different types of meat imported into the United Kingdom.

The Government of the United Kingdom undertook that the quantities of foreign *chilled beef* allowed to be imported into the United Kingdom during each quarter of the period from 1 January 1933 to 30 June 1934 should not exceed the quantities imported in the corresponding quarters of the twelve months ended 30 June 1932. (This period is frequently referred to as " the basic Ottawa year ").

The maximum quantities of foreign *frozen beef and veal* allowed to be imported into the United Kingdom over the same period were to be subject to a graduated restriction, expressed as percentages of the quantities imported in the corresponding quarters of the basic year, as follows: January-March 1933, 90 per cent.; April-June 1933 85 per cent.; July-September 1933, 80 per cent.; October-December 1933, 75 per cent.; January-March 1934, 70 per cent.; April-June 1934, 65 per cent.

On the other hand the United Kingdom agreed not to impose any restriction upon imports of frozen beef from Australia or New Zealand during the period 1 January 1933 to 30 June 1934. The Commonwealth Government in Australia, in return, undertook to use its best endeavours to ensure that during the year 1933 the exports of frozen beef from Australia to the United Kingdom should not be increased to an extent exceeding 10 per cent. of the quantities exported during the basic year 1931-32. New Zealand, while giving no undertaking in respect of its comparatively small beef export estimated the exports for the season 1932-33 at a quantity representing a maximum increase over the previous season of approximately 10 per cent.

The imports of foreign *frozen mutton and lamb* into the United Kingdom were to be restricted in accordance with the same graduated scale as the imports of foreign frozen beef.

As with frozen beef, the United Kingdom agreed that it would impose no restrictions on imports of frozen mutton or lamb from Australia or New Zealand during the period 1 January 1933 to 30 June 1934. On this express understanding, and in view of the agreed reductions imposed by the United Kingdom on foreign supplies of mutton and lamb, Australia and New Zealand undertook to limit their shipments of frozen mutton and lamb made to the United Kingdom during the calendar year 1933 to the quantities shipped by the two countries respectively in the basic year ended 30 June 1932 To assist in the orderly marketing of supplies, New Zealand, the larger supplier of the two countries, gave a further undertaking that a reliable estimate of these shipments would be given as early as possible in each export season, *i. e.*, from October in any year to 30 September in the following, and an estimate was given (actually of 4,000,000 cwt.) for 1932-1933 with a five per cent. increase in each of the years 1933-34 and 1934-35.

In regard to all classes of meat, the Government of the United Kingdom undertook to consider during 1933, in consultation with the Dominion Governments, the best means of ensuring an improved price situation and the more orderly marketing of supplies. Failing the adoption of an agreed permanent policy, the Government of the United Kingdom undertook that after June 1934, until the expiry of the Ottawa Agreements in 1937, it would arrange for the continuance, unless otherwise agreed between the Governments concerned, of the regulation of the imports of foreign meat at the rates in force in April-June 1934.

In the Agreement between the United Kingdom and South Africa no specific mention was made of beef, but the Government of the United Kingdom undertook that, in applying any powers that it might obtain from Parliament for the quantitative regulation of imports of mutton and lamb into the United Kingdom it would make provision for the importation of South African mutton and lamb.

In its Agreement with Canada the Government of the United Kingdom undertook to invite Parliament to pass the legislation necessary to modify the conditions governing the importation into the United Kingdom of live cattle from Canada on lines that had already been agreed upon in principle.

The Ottawa Agreements remain in force until August 1937 and until that date the United Kingdom is further precluded by their terms from imposing any form of duty or levy on Dominion imports of meat except with the consent of the Governments concerned. On the other hand, it will be noted that the United Kingdom was not precluded from imposing quantitative restriction on Dominion imports of meat after 30 June 1934.

The Anglo-Argentine Trade Convention, which was signed in London on 1 May 1933, became effective in November 1933 and expires in November 1936, contained important undertakings in regard to meat. The trade in meat is of paramount importance to Argentina, while it was also essential to the United Kingdom to preserve the trade with Argentina, which is a large importer of British manufactured goods.

Under Anglo-Argentine Agreement Great Britain undertook that, except in so far as essential to maintain prices of home-killed beef, restrictions would not be imposed on imports of chilled beef from Argentina below the level of the quantities imported in the corresponding quarter of the year ended 30 June 1932, in other words, below the 100 per cent. of basic year imports indicated under the Ottawa Agreements for chilled beef imports from foreign sources. In the event of any reduction below this level becoming necessary, the United Kingdom further undertook that (*a*) in the case of a reduction by 10 per cent. or less below the level of the basic year, the amount so excluded was not to be effectively replaced by imports of chilled beef from other sources, except in the case of the Dominions by experimental shipments only; (*b*) any reduction of more than 10 per cent. was to apply proportionately to similar imports from other meat supplying countries, including the Dominions.

In respect of imports of frozen meat (beef, mutton or lamb) no restrictions were to be imposed in excess of the graduated scale specified in the Ottawa Agreements, unless imports from the Dominions were similarly restricted.

Prior to the coming into force of the Anglo-Argentine Trade Convention, and even of the Ottawa Agreements, it was found necessary, in view of the continued decline of wholesale prices of home-killed beef, to make voluntary arrangements with South American shippers for the immediate reduction of their imports of chilled beef. The shippers agreed to reduce their marketings of chilled beef in the United Kingdom by 10 per cent., rising if necessary to 20 per cent., during the months of November and December 1932. In the first quarter of 1933 the imports of chilled beef from South America were 10 per cent. below the rate permitted by the Ottawa Agreements, but for the second quarter a reduction of only 2 per cent. was arranged. For the third quarter it was arranged that the imports of chilled beef should be 10 per cent. less during the first half of the quarter than in the corresponding period of the year taken as a base in the Ottawa Agreements and 12 ½ per cent. less during the second half of the quarter. For the first half of the last quarter of 1933, the reduction asked was 15 per cent., or as near thereto as was compatible with the economical use of the shipping space available.

In the first quarter of 1934, voluntary arrangements were made to reduce imports from foreign countries by the same extent as in the first quarter of 1933.

In the second quarter imports from foreign countries were reduced under similar arrangements by 3 3/4 per cent., as compared with imports in the second quarter of 1932.

No voluntary arrangements were made for further restriction on the imports of frozen beef.

Voluntary arrangements were made with the South American shippers to reduce their marketings of frozen mutton and lamb in the United Kingdom by 20 per cent. in November and December 1932. The Australian and New Zealand Governments agreed, without prejudice to their position under the Ottawa Agreements, to reduce their shipments during the same months to 10 per cent. less than their shipments in the corresponding month of 1931. The reduction in imports from New Zealand was, in fact, considerably greater, being 44 ½ per cent. in the case of mutton and 37 per cent. in the case of lamb. No special arrangements were made in regard to imports of mutton and lamb after the beginning of 1933, the reductions being as laid down in the Ottawa Agreements.

With a view to avoiding further reductions in the prices of cattle in the United Kingdom, an Order under the Agricultural Marketing Act of 1933 was issued by the Board of Trade in December 1933 regulating the importation of fat and store cattle from the Irish Free State and prohibiting the importation of beef, veal and beef and veal offals from that country. The main effect of the Order was to secure a reduction of 50 per cent. in the imports of fat cattle and to prevent any increase in the importation of store cattle. In each case the comparison was with the corresponding quarter of 1932-33.

The Canadian Government was asked to co-operate by stabilising the exports of cattle, both fat and store, to the United Kingdom for the first quarter of 1934 at the corresponding figures of the first quarter of 1933 and agreed to do so.

The measures to regulate the supplies of beef and of fat cattle did not bring about the desired improvement in the prices of fat and store cattle and the Government examined various possible means of relieving the serious position of the beef producers. The means examined were set out in a White Paper on the Live Stock Situation in July 1934. They included:

(*a*) a drastic reduction of imports by means of quantitative regulation;

(*b*) action along the lines of the Wheat Act, 1932, involving the collection of a levy on imports of meat, to provide a fund from which payments could be made to supplement the returns accruing to home producers from the sale of their stock in the open market, imports being unregulated;

(*c*) a levy on imports and payments to producers, as referred to above, coupled with some degree of direct supply regulation in the interests of all suppliers.

The Government favoured the last proposal as the best long-term solution of the problem, but owing to the Ottawa Agreements and the Agreement with Argentina, so far as the levy was concerned, the proposal could not be carried out except with the consent of the Governments of the Dominions and of the Argentine Government. Discussions were opened up with these Governments, but, as they were likely to be somewhat prolonged, immediate steps had to be taken to relieve the position of the home producers.

Accordingly in July the Government introduced an emergency measure which was passed rapidly through Parliament and became law as the Cattle Industry (Emergency Provisions) Act, 1934.

Under this Act a Fund was established, to be known as the " Cattle Fund, " and the Treasury was authorised to make advances to it during the financial year ending 31 March 1935 not exceeding £ 3,000,000. Out of this Fund the appropriate Ministers—for England and Wales, the Minister of Agriculture; for Scotland, the Secretary of State for Scotland; for Northen Ireland, the Secretary of State for the Home Department (England)—were empowered to make payments to producers of cattle in respect of steers, heifers and " cow-heifers " (1) or the carcases of such animals, sold by the producers in the United Kingdom during the period beginning not earlier than 1 September 1934 and ending on 31 March 1935. The payments were not to exceed 5*s.* per cwt. in the case of live animals nor to exceed 9*s.* 4*d.* per cwt. in respect of carcases. The rates of payment were fixed by an Order made by the Ministers and issued on 21 August 1934 at the maximum rates allowed by the Act.

The Act further authorised the Ministers to appoint an advisory committee to be known as " the Cattle Committee. " Such a Committee was in fact formed on 31 July, and immediately prepared a plan of arrangements for carrying out the provisions of the Act. The plan included the recognition by the Committee itself of Live-weight Certification Centres at which producers were to present animals in respect of which they wished to claim payment and of Dead-weight Certification Centres at which carcases were to be presented. At the Live-weight Centres, Certifying Authorities were to be appointed consisting of three persons who would determine whether an animal was eligible, and would see that it was properly weighed. A Certifying Officer was also to be appointed who would issue a certificate in respect of eligible animals; this Officer would be a member of the Certifying Authority. At Dead-weight Centres only a Certifying Officer was to be appointed, who would determine the eligibility of animals and carcases and issue the certificate.

The standard laid down for eligibility for the subsidy from 1 September to 31 December 1934 was that the animal should have an estimated killing-out percentage of not less than 52 per cent., and from 1 January to 31 March 1935 a killing-out percentage of not less than 54 per cent.

The number of cattle certified in the United Kingdom in each month from September 1934 to February 1935 was as shown in Table III (page 360).

Of the total number, 741,637, the animals certified at Live-Weight Certification Centres accounted for 724,723 while only 16,914 animals were certified at Dead-Weight Certification Centres.

The average live-weight at which fat cattle were marketed over the whole of the United Kingdom in the six months was 9 cwt. 2 qr. 8 lb. For England and Wales the average was 9 cwt. 2 qr. 10 lb.; for Scotland, 9 cwt. 3 qr. 2 lb., and for

(1) A " cow-heifer, " as defined in the Act, is an animal which has calved, but which has grown not more than six permanent incisor teeth.

Northern Ireland, 8 cwt. 2 qr. 14 lb. The dressed carcase weights of the animals certified at the Dead-Weight Certification Centres average 601 lb.; for England Wales the average was 598 lb. and for Scotland 617 lb.

TABLE III. — *Certified Cattle.*

	Steers	Heifers	Cow-heifers	TOTAL
September 1934	62,104	49,354	3,792	115,430
October »	69,276	58,462	4,592	132,330
November »	58,403	50,728	4,130	113,261
December »	63,638	51,083	3,832	118,553
January 1935	82,093	51,869	4,953	138,915
February »	77,576	41,157	4,415	123,148
Total for the six months	413,090	302,833	25,714	741,637

As the negotiations with the Dominions and with Argentina had not been concluded when the period for which the subsidy was granted was nearly at an end a further Act—the Cattle Industry (Emergency Provisions) Act, 1935—was passed providing for a short extension of the provisions for the payment of the subsidy. This extension was limited to three months in the first instance, but the Act provided for a possible further extension to six months and the period was subsequently extended to 30 September in accordance with this provision.

Up to 11 April 1935, subsidies amounting to £2,129,832 had been paid in respect of 888,848 animals, the average payment per beast being £2 8*s* 0*d*.

(*To be continued*)

CAROLINE HUBBACK.
J. K. MONTGOMERY

AGRICULTURAL CO-OPERATION IN SWEDEN

(*Continued*).

3. — CO-OPERATION AND THE DAIRYING INDUSTRY.

The total production of milk in Sweden may be estimated at present at about 4,700,000 tons, of which 1,700,000, or one third, are consumed by the producers as human food or stock feed, and the remainder, 3,000,000 tons, is sold, thus accounting for about 40 per cent. of the gross returns of farming. Of the total quantity sold, about three fourths is handled by dairies of which there

are about 1,500, nearly half being co-operative dairies. The part played by these latter in the Swedish dairying industry is, however, much more important than would appear from the above figures as they are generally larger than the private dairies. The co-operative dairies group on an average three times the number of suppliers and handle three and a half times the quantity of milk per dairy of the other dairying enterprises, also about three fourths of the total quantity of milk passing through all dairies is handled by the co-operative dairies which also produce about 80 per cent. of all the dairy butter. On the other hand, in respect of cheese production it is only during the last few years that the co-operative dairies have become of importance, and the quantity of cheese produced has only of late years reached the level of the private dairies.

With few exceptions—among which is, however, found the largest dairying business in the country, the Milk Central (*Mjölkcentralen*) at Stockholm which will be mentioned again later on—there was, five years ago, little co-operation between the dairies on the national market which, in respect of milk production in Sweden, is much the most important. On the other hand, for exportation of butter, regional associations were already constituted grouping the co-operative dairies and, in order to benefit joint interests in marketing conditions, a single organisation of co-operative and private exporting dairies, called the *Sveriges smörexportfirmors förening*, had been founded in 1928. The effects of the competition between the different dairies and between the dairies and the unorganised producers were naturally aggravated at the beginning of the present agricultural crisis and rendered even more pressing the need for radical reforms in the dairying industry, both from the standpoint of organisation and from the commercial point of view. In order to encourage these reforms, the Parliament in 1930 and 1931 voted large credits and also passed a Law in 1932, to which reference will be made later, imposing a levy on milk intended for the market with a view to equalising the price of butter for export and butter sold on the national market. With the help of this State subsidy, an extensive and efficacious work of organisation was undertaken under the direction of the *Sveriges Allmänna Lantbrukssällskap* (General Agricultural Society of Sweden); new co-operative associations were established, dairies which did not come up to modern requirements were replaced by modern dairies, the smaller dairies were grouped into larger concerns and dairying organisations were established in the largest areas. For the use of all these re-organised and newly formed bodies, the Society drew up model rules framed with the object of transforming both large and small dairies into sound economic enterprises.

Two methods were followed for grouping the dairies into larger units: either all the dairies in a territory were amalgamated into a single economic enterprise under a joint management or else the various dairies remained independent, but were grouped under the name of Dairying Federations (*Mejeriförbund*). These processes of amalgamation and federation were carried out very rapidly, and by May, 1932, when these organisations were formed into a single national organisation, the *Svenska Mejeriernas Riksförening* (National Union of Swedish Dairies), they were 17 in number, each covering one or several provinces with a total of 467 affiliated dairies and handling a quantity of milk corresponding

to 53 per cent. of the total volume handled by all the dairies in Sweden. Since that time the development has continued and, at the end of 1934, the Union included 27 dairying organisations which represented 764 dairies, as well as 173 secondary dairies and separating stations, 84 per cent. of all the dairy butter in the country and 57 per cent. of the total cheese production in Sweden.

Organisation of Local Dairying Associations. — From the standpoint of organisation, the co-operative dairies still show considerable variations, but the work of re-organisation is being continued with increasing observance of the model rules drawn up by the General Agricultural Society of Sweden. According to the provisions contained in these model rules, membership of an association of co-operative dairies is obtained by the payment of a share of 60 crowns per cow on any farm situated within the area of activity of the association. Of this initial payment of 60 crowns, 10 crowns should be paid in cash when joining and the remainder is payable in monthly instalments. The member is expected to deliver all the milk produced on his farm to the association, with the exception of the quantity required for household use. With the consent of the council of the association, and at the price fixed by it, the member may, however, sell his milk in a place where the association's milk is not sold. The supreme authority of the association is vested in the general meeting, at which every member has a right to one vote for every ten shares on which payments are in course of being made. The association, before making payments for the milk consigned to it, first deducts from the sum available for this purpose each month the sum required for management expenses, while 0.50 per cent. is placed to the reserve fund during each of the first five years, and subsequently 1 per cent. till 20 per cent. of the initial capital has been reached. If after these monthly deductions have been made, the balance at the end of the year shows a profit, at least 10 per cent. is deducted from the surplus and placed in the reserve fund, up to an amount not exceeding the percentage already indicated. When the profits are no longer transferred to the reserve fund, at least 20 per cent. of the surplus should be assigned to the renewals fund. A final distribution of profits among members is made in proportion to the milk payments received by them in the course of the year.

Organisation of the "Amalgamated Dairies." — This, in accordance with the model rules drawn up by the General Agricultural Society, much resembles that of the local dairying associations, in respect of the initial payments, the obligations of members, and their rights of voting, the composition of the administrative council, sinking funds and other funds, etc. The essential differences, resulting from the greater extension of the amalgamations, are that the right to vote in the general assembly is not exercised directly by the members, as in the local organisations, but by their representatives elected by district meetings at the rate of one representative per each 500 initial payments in the district; and that an Administrative Council exists, in addition to the Council of Management, which takes part in the deliberations of the latter in questions of importance. In the district meetings, which are meetings of members in the respective districts

into which the activity of the amalgamation is divided, the right to vote is exercised according to the same rules as for the assemblies of local associations.

Organisation of Dairying Federations. — In accordance with the model rules drawn up by the General Agricultural Society for the use of dairying federations, these organisations admit as members, not only co-operative dairies, but also, when necessary, private dairies on condition that their rules are not contrary to the objects of the associations.

The object of the dairying federations is to improve the quality of the milk and dairy products, to prevent internal competition between the dairies, to encourage the scientific organisation of the dairying industry, to increase the consumption of milk and dairy products, to encourage the adoption of a unified accountancy and of a single payment system, to act as an intermediary for the purchase of machines and other equipment required for the affiliated dairies, to encourage co-operation in agriculture by educational means, etc.

When joining a dairying federation the member takes up one share for each 100,000 kg. of milk delivered during the previous year or a corresponding quantity of cream. These shares amount to at least 200 crowns each, 15 to 20 per cent. of which is paid in cash and the remainder in monthly instalments over a period of 2 to 3 years. In addition to this initial payment, the member is also obliged, on joining the federation, to sign a guarantee to pay double the amount of his share one month after cancellation of membership which takes place only if the member fails to carry out his duties. The proportion of the guarantee sum, actually required to be paid, is decided by the Council.

The member is expected to deliver all his milk and dairy products for sale to the federation, but the council of the federation may, if considered advisable, entrust a member with the sale on the local market on behalf of the federation according to the conditions fixed by the council.

A member may resign from the federation not earlier than two years after the date of joining.

In the general meeting each member has the right to one vote and an additional vote for each ten shares over and above the first share. When more important questions have to be decided, the council of management, composed of 7 members elected by the general meeting of the federation, is assisted by an administrative council of 20 members elected by the councils of management of the affiliated organisations.

To cover the expenses of the federation a certain commission is charged on the sale of products or on purchases made on behalf of members. In addition, before payment is made for products delivered, 0.02 öre per kg. of milk is deducted and placed in a special fund which cannot be drawn on except in cases of emergency.

At least 20 per cent. of the profits should be placed in the reserve fund up to the amount of 20 per cent. of the initial capital. With the rest of the profits a dividend may be paid of 5 per cent. on fully paid shares and the remainder, according to the decision of the assembly, constitutes a fund or is distributed among the members in proportion to their turnover during the course of the year.

The activity of the *Mjölkcentralen* (Milk Central) of Stockholm, the largest regional organisation of dairies and milk producers, and, also probably the largest and most prosperous co-operative organisation in the world for the sale of liquid milk, may here be examined in rather more detail before passing on to a description of the organisation and activity of the *Svenska Mejeriernas Riksförening* (National Union of Swedish Dairies). The *Mjölkcentralen*, which was established in 1915 by a co-operative organisation that had taken over a private milk distribution business, on 1 July 1935 included 15,990 affiliated farmer members owning 154,420 cows, *i. e.*, an average of 10 cows per member. The area of supply to the Central from the districts surrounding the capital extends to a radius of about 160 km. On 30 June 1935 the Central was operating 34 butter making dairies and 78 cheese factories besides a large number of separating and collecting stations. The total quantity of milk received at all these localities taken together from 1 July 1934 to 30 June 1935 amounted to 467,000,000 litres, *i. e.*, to about 1,300,000 litres per day. During the same period 10,900,000 kg. of butter were sold and 7,100,000 kg. of cheese were made by the Central. This body also carries on a very considerable trade in eggs, and is engaged in casein manufacture and in pig raising. About two thirds of the milk supplied to the capital is under the supervision of the Central which maintains some 150 retail sale depots in Stockholm. A very large proportion (amounting to nearly 13,000,000 litres) of the milk sales made by the Central in the capital is however, as previously stated, effected through the Consumers' Co-operative Association of Stockholm.

The function of the *National Union of Swedish Dairies* is to promote the economic interests of its members by selling, within such limits as are imposed by circumstances, the milk of its members and their dairy products. It has moreover to act as intermediary for the purchase of material required by the dairying industry, as well as to carry on other activities compatible with these. It is the business of the association, in addition, to organise collaboration between members and to effect a price equalisation, to arrange quotas and restrictions in respect of cheese manufacture; to work for the scientific management of the dairying industry and for the improvement of the quality of dairy products. It has also to arrange propaganda with the object of increasing the sale of Swedish dairy products, to supervise the training of the staff of dairy establishments, to give the proper advice on the construction and equipment of dairies, to give attention to the unifying of systems of accountancy, of business analysis, of audit, of production statistics and of scientific working of dairies, In addition the Union is called upon to undertake price fixing and to give market information. In short, the Union has to be prepared, from all standpoints within and outside Sweden, to protect and represent the general interests of the dairying industry, and in collaboration with the other agricultural organisations, to promote the co-operative movement in agriculture.

Membership of the Union is open to all dairying organisations and dairying businesses of a certain importance, whether co-operative or otherwise, in so far as nothing is contained in their rules which is contrary to the general policy of the Union.

Every member is expected to take a share in the association of 50 crowns for each complete million kgs. of milk as weighed and of milk-equivalent of cream in the course of the last year of activity. Payment for the share will be made in cash up to 20 crowns and the remainder in instalments spread over three years.

Every member must in addition pay to the Union a fixed annual contribution the maximum for which will be 15 öre per 1,000 kgs. of milk as weighed on the farm of the member in the course of the previous working year. He must entrust to the Union the sale of the whole of his butter, all his milk and all the cream which he does not market in the area fixed by the Union for his activity. As guarantee of fulfilment of his obligations every member is expected, finally, at the time of his enrolment as member, to subscribe a guarantee bond of a value ten times the sum which he has paid on admission.

No member may withdraw from the association till after the completion of five years of membership.

At the general meeting which, *inter alia*, appoints the Management Council of from 7 to 11 persons, every member has a right to one vote for each share held. One place on the Council is reserved for the General Agricultural Society of Sweden. In addition to the general meeting and the Management Council, there is also an Administrative Council which will be called upon to give advice every time the Management Council has important questions to resolve. It consists of one member for each affiliated organisation.

Out of the profits made by the Union, at least 20 per cent. will have to be placed to the reserve fund, until that fund reaches five times the initial share capital. If there is sufficient profit, and on a resolution passed by the general meeting, an interest of five per cent. on paid up shares may be assigned; if any profits remain they should be used for the purposes of the association, or invested.

Before passing on to an examination of the work achieved by the Union for the accomplishment of its objects, mention should be made of the measures taken by the State in the course of 1932 and 1933 for regulation of the milk and milk products market, as the effecting of such regulation is one of the main objects of the Union.

As previously stated, the *Riksdag* of 1932 resolved to impose under certain conditions levies on milk, partly with the intention of thereby levelling the prices of fluid milk and of milk required for the making of dairy products (in this case a local charge), and partly in order to raise the prices for butter and cheese on the national market, thus rendering them independent of the prices that could be obtained on the export market (in this case a general tax). In other words, it was intended through the general tax, by guaranteeing the dairies which produced for purposes of export the same price for butter for export as for the butter sold within the country, to encourage them to continue with their export trade instead of entering into competition on the national market. It was on the other hand intended by means of the local charge to raise the price of milk sold for the manufacture of dairy products so as to avoid allowing the butter and cheese making dairies in general to enter into competition on the local

market with the better paid milk intended for direct consumption. The general tax was to be imposed on all milk placed on the market in Sweden, as well as on all the milk utilised by the producers themselves for the manufacture of cream, butter and cheese. The local charge was to be imposed on all milk and all cream marketed in the production zones of the centres of consumption, provided it was not intended for the manufacture of dairy products. The Government was empowered to grant authority, on special application, to impose and administer the general tax to any dairy organisation representing 60 per cent. of the milk supplied in the dairies of the country provided that at least two thirds of the members of these organisations, representing at least three fourths of the quantity of milk passing through all the dairies, signified approval. On the other hand authority to impose and to administer the local charges was granted only to an organisation representing at least 70 per cent. of the total quantity of milk sold in the district, and only on condition that the application for authority was supported by at least three-fourths of the membership, representing at least four-fifths of all the milk handled in the dairies affiliated to these organisations. A special Milk Commission was appointed by the State to supervise the observance of these provisions.

Authority to levy the general tax — fixed at first by the Government at 0.2 öre per kg. of milk and later at 0.4 öre per kg. — was granted in the autumn of 1932 to the National Union of Swedish Dairies which had already in respect of the extent of its operations fulfilled the conditions prescribed by the law.

On the other hand, the introduction of the local charge in the area of activity of the regional organisations, the dairy federations and the "amalgamated dairies," took much more time to effect, and accordingly the *Riksdag* of 1933 decided to abolish the measure relating to this charge and to replace the local charge by a general tax, levied at a maximum of 3 öre per kg. on all the milk sold, irrespective of the use to be made of it, as well as on all the milk used by farmers for butter and cheese making for the market. The new general tax is intended to fulfil the same purpose as the two former charges, and should thus make provision for the equalisation of the prices of fluid milk and of milk intended for manufacture of dairy products, such equalisation being in this way brought about independently of the success of the endeavours for organisation in the different districts (1).

(1) The general tax is at present 2 ore per kg. for all milk and for the equivalent in milk of the cream offered for sale as also for all the milk used by the farmers for butter and cheese making for the market, in so far as the producer utilises for such manufacture at least 2,000 kg. per month of milk produced on his own farm. The tax is not applicable to milk produced and sold in certain distant parts of Sweden, nor to milk and cream produced on farms where there are not more than two cows and where milk is not sold to dairies or to dairymen, nor to milk sold to persons in the employ of the producer, etc. The sale of fluid milk, not subject to the tax, was estimated in 1934 at 200,000 metric tons (6 to 7 per cent. of all milk sold) and the quantity of milk exempt from the tax and utilised by the producer for butter and cheese making for the market, at 150,000 tons, or about 5 per cent. of all the milk directed to the market.

The efforts made by the Union for stabilising the price of butter on the national market and for making it independent of prices obtained by the surplus butter production destined for export—prices which were formerly decisive also for price formation in Sweden—have met with complete success up to now. While, for example, the export price of the " Run " mark butter varied in the Swedish ports in the course of 1934 from 98 to 167 öre per kg., and amounted on the average to 116 öre, it has proved possible to maintain the price for the whole country, fixed by the Union for this same butter, invariable at the desired level of 230 öre per kg. wholesale, and the milk levy has made it possible to compensate the exporters for the difference between this latter price—which they had to pay at the time of purchase — and the price they secured from their sales abroad (1).

The regulation of the butter market has not, however, merely taken effect in the direction of an increase in prices of butter and of milk intended for butter making, but it has also reacted favourably on the price of fluid milk, so to say, throughout the country, and on the price of milk utilised for cheese making. These prices apart from such regulation would have been bound to fall in consequence of the very low export prices for the surplus butter production. It is not possible to indicate exactly the losses that would have resulted from the price falls and which have been avoided thanks for the regulation of the milk, but the Union estimates these at frcm 3 to 4 öre per kg. at least for all the milk placed on the market, that is to say, at a total of about 100,000,000 crowns. This sum, after allowing for that part of the taxes that is utilised for butter regulation, represents a net profit of 80 to 85,000,000 crowns which is a contribution in 1934 to the milk producers of Sweden due to milk regulation.

In order to achieve the other purpose of milk regulation, *viz.*, the equalisation of the prices of fluid milk and of milk intended for making of milk products, the country has been divided into seven districts. The surplus remaining in each district from the tax on milk levied in that district is employed in the district itself for the purpose of bringing about this equalisation. The price equalisation subsidy allowed for manufacturing milk varies according to the proportion obtaining in each district as between the two classes of milk. The subsidy is

(1) Up to 1 July 1934 the equalisation contribution taken from the fund of milk taxes was only paid for a part of the exported butter, up to 15,000,000 kg. per year; the equalisation of the prices for the quantities exported exceeding the figure indicated was financed by the tax on margarine which the *Riksdag* of 1933 had authorised the Government to impose, and which from 24 June 1933 had been levied at the rate of 20 öre per kg. On the other hand from 1 July 1934 the contribution to the equalisation of the prices of butter for export is levied half on the funds of the margarine tax and half on the funds of the milk tax, the first charge being on this latter. Thus, the larger the export of butter the smaller becomes the share of the tax on milk which remains for equalising on the national market the price of fluid milk and of milk for manufacturing. At present, therefore, more than before the interest of producers is to limit unremunerative exportation by reducing production and by encouraging measures designed to increase the consumption of butter in Sweden.

relatively high where a relatively high percentage of milk is sold as fluid milk, as for example in North Sweden, while it is lower where the percentage of fluid milk is less as in the most southern province of the country. The equalisation subsidy for manufacturing milk prices in 1934 reached for the whole country an average minimum of 1,802 öre per kg. in the month of March, and a maximum of 2,737 öre in December. This shows, taking into account what has already been said, *viz.*, that a general tax of 2 öre is levied on all milk intended for the market, that the milk produced in the month of March has been subject only to a net charge of about 0.2 öre and that in December the subsidy not only paid the tax but left over a balance of 0.7 öre per kg. for the producer.

As has already been said, one of the principal functions of the National Union of Dairies was to provide for the marketing of surplus products within the country and abroad. The marketing of these products within the country, which is directed towards the large centres of consumption and the north of Sweden, is carried out through a Central specially established by the Union for this purpose.

To facilitate the organisation of exports, the Union came to an agreement in 1932 with all the exporters of butter by which the latter undertook to buy and export surplus butter under certain conditions, and to a certain extent under the supervision of the Union. From 1935, however, the butter exporting firms, which were limited to three, were placed completely under the general direction and supervision of the Union. From this reform it is hoped to economise expenditure and to improve market conditions.

The Union had also in view the situation of the cheese market and for this purpose had started monthly statistics on the manufacture of cheese and on stocks of cheese in the dairies, thereby making possible a survey of the market conditions and at the same time indicating any occurrence of over-production, a frequent source, during the last few years, of falling prices and losses for the cheese factories.

To supply the necessary requisites to the dairies, the Union has organised a special section which now also furnishes the individual members of the dairies with the requisites necessary for the handling of the milk at the place of production. With a view to the scientific organisation of the various enterprises and to the simplification of the accountancy of the affiliated dairies, the Union, in collaboration with the General Agricultural Society of Sweden, has drawn up a suitable scheme of accountancy systems and organised courses on the subject for managers of dairies and chief accountants. With the object of estimating the output of the dairying industry, the Union, in collaboration with the General Agricultural Society of Sweden, also has made investigations into about 200 dairies, chiefly those in the south of Sweden which produce butter. This enquiry will subsequently be extended to all the dairies in Sweden.

Finally, it must be mentioned that the Union, in its work of propaganda for an increase in consumption of milk and milk products — which, as stated, constitutes an important part of the Union's programme — has already achieved considerable successes. The propaganda made in collaboration with the *Mjölkpropagandan* (Milk propaganda), an association established in 1923 for the pur-

pose of extending the recognition of the true value of milk and milk products by means of educational propaganda for milk consumers, was previously directed towards increasing the consumption of butter, but is now chiefly concentrated on increasing milk consumption.

(To be continued).

H. LINDSTEDT.

HAIL INSURANCE IN FRANCE

Hail insurance is practiced in France by three classes of institutions: limited liability companies, large mutual insurance societies and agricultural mutual insurance societies.

In 1934, the following companies and societies were practising this branch of insurance:

(a) *Limited liability companies:*

" L'Abeille, " founded in 1856 (capital, 4,800,000 francs).
" La Confiance, " founded in 1878 (capital, 6,000,000 francs).
" La Rurale, " founded in 1895 (capital, 4,000,000 francs).
" La Protectrice, " founded in 1911 (capital, 10,000,000 francs).
" La Nationale, " founded in 1920 (capital, 10,000,000 francs).

In the two last-named companies, hail insurance is only a subsidiary branch.

(b) *Large mutual insurance societies:*

" La Cérès, " founded in 1823 (reserve fund, 3,223,470 francs).
" Société de Toulouse, " founded in 1826 (reserve fund, 10,759,110 francs).
" Mutuelle de Seine-et-Marne, " founded in 1829 (reserve fund, 13,307,858 francs).
" Etoile, " founded in 1834 (reserve fund, 8,560,727 francs).
" Beauceronne Vexinoise, " founded in 1849 (reserve fund, 2,658,347 francs).
" Mutuelle de Seine-et-Oise, " founded in 1854 (reserve fund, 1,128,360 francs).
" Garantie Agricole, " founded in 1854 (reserve fund, 1,987,073 francs).
" Régionale du Nord, " founded in 1896 (reserve fund, 505,190 francs).
" Gironde, " founded in 1887 (reserve fund, 24,894 francs).
" Ferme, " founded in 1887 (reserve fund, 191,319 francs).
" Ruche, " founded in 1896 (reserve fund, 4,265,514 francs).
" Mutuelle du Poitou, " founded in 1908-14 (reserve fund: those of other branches) (1).

(1) *Argus, Journal international des assurances*, 19 May 1935, p. 703.

As to the agricultural mutual insurance societies there were 378 societies in 1928 with 11,837 members (1).

It would seem that the first attempt at insurance against hail in France was made at Toulouse where the " Société d'assurances réciproques contre la grêle " was founded in the year IX of the First Republic. In the year XIII insurance against the mortality of live stock was added to hail insurance, and afterwards insurance against fire; insurance against frost, floods and hurricanes was, on the contrary, excluded. In 1804 the " Mutuelle Grêle de Bergerac " was founded; in 1807 that of Mont-de Marsan. But these societies were not successful. Shortly afterwards the Toulouse society ceased to exist, to be revived again in 1926.

It may be of interest to give some account of the first serious attempt at State insurance in the nineteenth century. In 1857 the Minister of Agriculture submitted to the Council of State a bill for the establishment of a general agricultural insurance fund for the purpose of " compensating the farmers by means of a fixed and voluntary annual contribution for the losses caused to their crops and their live stock by hail, frost, flood and mortality. " But the Council of State rejected the proposal almost unanimously. It was then decided to establish a fund in the form of a limited liability company with a capital of a million francs under the name of " Caisse Générale des Assurances Agricoles, " the object being " the formation and management of mutual societies for insurance, on the basis of fixed contributions, against hail, frost, floods, the mortality of live stock and fire. " The decree authorising the establishment of the " Caisse Générale " made it obligatory for the company to present a detailed report on its operations to the Minister every year and to deposit its reserve fund in the " Caisse des Dépôts et Consignations; " the authorisation of the Minister was required for withdrawing any sum whatever from the reserve fund. But the affairs of this company did not prosper and it went gradually into liquidation: the fire insurance fund in 1862, the hail insurance fund in 1867 and live stock insurance fund in 1886 (2).

The oldest limited liability companies still existing in 1934 were " L'Abeille, " founded in 1856; " La Confiance, " founded in 1878, and " La Rurale, " founded in 1895. As to the large mutual societies, besides the Toulouse society there still existed societies the formation of which dates back to the first half of the nineteenth century: " La Cérès, " founded in 1823, " La Mutuelle de Seine-et-Marne, " founded in 1829; " L'Etoile, " founded in 1834 and " La Beauceronne Vexinoise, " founded in 1849.

As to the small local societies, the origin of which, it would seem, can be traced back to the vocational mutual aid societies formerly founded by the corporations, they were formed in large numbers in the course of the first half

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(1) *Annales de la mutualité et de la coopération agricoles*, January 1932, p. 34. Rapport au Président de la République française en date du 15 juillet 1931 sur le fonctionnement des sociétés d'assurances mutuelles agricoles en 1928.

(2) BLANCHOIN: L'assurance mutuelle agricole. Essai sur l'assurance corporative, 1935, p. 104.

of the nineteenth century in certain regions, notably in the Southwest, in the Pyrenees, in the East, and in Brittany and Vendée. But the creation of numerous mutual societies with a large area of operations for insurance resulted in an appreciable decline in the number of small local societies notably because of the importance of the large mutual societies, the work of which was based on a perfected insurance technique.

At the beginning of the second half of the nineteenth century these local societies again began to develop, profiting by the example given to them by the large insurance societies. However, another obstacle to their development made itself felt—their legal status. But first the Law of 21 March 1884 on vocational syndicates, the application of which in the domain of insurance was the subject of incessant discussions, and subsequently the Law of 4 July 1900, which gave a decisive and official interpretation to the Law of 1884, conferred considerable advantages on this type of society (1). As we shall see presently there were only twelve mutual agricultural societies for insurance against hail in 1898. In 1900 there were 16. But from this date onward they grow in number, reaching 24 in 1909. After the war several of these societies disappeared; there were only 12 in 1922. In 1923 the very important law on the constitution and working of mutual societies which apply for State subsidies was promulgated. Since that date there has been a constant increase in the number of these societies.

But the Decree of 1923, though providing for mutual societies as a whole, did not contain any special provision for hail insurance societies. In fact Article 30 of the law above mentioned stated that special decrees shall lay down the particular rules for the organisation and working of mutual societies for insurance against accidents, against hail and other weather risks, as well as the conditions under which subsidies may be granted to them. The legislative measures subsequently issued by the public authorities, which we shall examine presently in detail, give reason to anticipate that there will be a marked development in this type of insurance.

The legal provisions relating to insurance companies and large mutual insurance societies are to be found principally in the Law of 14 July 1867 which allows them to be freely formed but makes their establishment subject to various formalities and imposes rules of working which were set out in the Decree of 22 January 1868 regulating public administration, which was replaced by another Decree in Council of State dated 6 March 1922. Further, a very important Law, dated 13 July 1930, on the insurance contract has since imposed restrictions on the insurance companies in the matter of contracts. Details regarding these laws will be found in an article on live stock insurance in France (2).

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(1) *Les dossiers du mutualiste agricole, Organe d'information et de documentation*, Paris, July 1933, p. 385.

(2) *Les dossiers du mutualiste agricole*, Paris, August 1933, p. 449. *Monthly Bulletin of Agricultural Economics and Sociology*, International Institute of Agriculture, May 1935. SUMIEN: Traité théorique et pratique des assurances terrestres et de la réassurance, Paris, 1931, p. 97.

The legal system of the mutual agricultural insurance societies practising hail insurance is determined by: (*a*) the Law of 4 July 1900, by which these societies are exempted from certain conditions laid down by the Law of 24 July 1867 on societies and by the Decrees of 22 January 1868 and 8 March 1922 on insurance societies; (*b*) the Law of 21 March 1884 on vocational syndicates and the Law of 12 March 1920, except in so far as the provisions of this law are incompatible with the working of a mutual insurance society; (*c*) the Decree of 2 August 1923, amended by the Decrees of 26 January 1930 and 8 September 1933, on the formation and working of mutual agricultural insurance societies which apply for State subsidies; (*d*) the Law of 13 July 1930 on the insurance contract, in so far as its provisions are not incompatible with the special regulations regarding these societies; (*e*) the Finance Law of 31 March 1932 based on of Article 145 of the Finance Law of 30 December 1928 and a certain number of other legislative measures subsequently issued, of which the following are the most important: the Decrees of 22 October 1932, of 18 March, 10 May and 10 July 1933 on the application of the Law of 31 March 1932 (1).

We have examined in the article on live stock insurance in France already mentioned the Decree of 2 August 1923 which laid down provisions for mutual insurance societies of all kinds but did not contain any special provision for hail insurance societies, though it dealt with live stock and fire insurance societies. We will now examine the Finance Law of 31 March 1932 as well as certain provisions contained in the regulations issued for the application of this law. These measures had as their primary object to assist the farmers whose crops had been damaged by hail either directly or by placing at the disposal of mutual insurance societies handling this kind of insurance the sums necessary for extending their action and for facing calamitous years.

The Finance Law of 31 March 1932 (2) lays down that mutual hail insurance societies working in conformity with the provisions of the Law of 4 July 1900 can, with the authorisation of the Minister of Agriculure given after consultation with the National Agricultural Credit Bank, obtain from the regional agricultural credit banks formed in accordance with the Law of 5 August 1920, loans at a rate of interest equal to the rate of interest on loans for medium terms, but repayable within a period which may be as long as fifteen years.

These loans may, however, be granted to them only on condition that their area of operations embraces at least a canton and that they have reinsured 80 % of their risks either with a mutual society (departmental or regional) for the re-insurance of hail insurance risks, itself re-insured with a society covering the whole country or directly with a society covering the whole country and working under the terms of the Law of 4 July 1900.

The National Agricultural Credit Bank was authorised to allocate to such loans a sum of 50 million francs.

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(1) *Les dossiers du mutualiste agricole*, 1933, pp. 319 and 619. SUMIEN, *op. cit.*, p. 131.

(2) *Journal Officiel*, 1 April 1932.

Re-insurance societies of the first and second degree may also obtain the same loans under the same conditions.

The Law contemplated the establishment of a fund to guarantee, if required, the repayment of these loans to the regional agricultural credit banks; it is maintained by the following resources:

(1) Contributions paid by the mutual societies formed under the Law of 1900 in proportion to the amount of the premiums received and the indemnities paid. The rate of these contributions is fixed by decree. The contributions are compulsory for societies which desire to benefit by the provisions of the Law;

(2) Any subsidies that may be given by departments, communes, public institutions or private individuals;

(3) A State subsidy, the amount of which may not exceed, during each of the five first years of the application of this provision, the product of the resources previously set out, and, in subsequent years, a figure equal to the half of such resources.

Moreover, up to the amount of the subsidies of all kinds which they may have received from the State, the assets of any societies which may be dissolved must be paid to the guarantee fund.

The guarantee fund is administered by the National Agricultural Credit Bank under the supervision of a special committee appointed by decree.

If the borrowing society fails to pay, within three months of the due date, the annual charge due to the regional agricultural credit bank, this bank may receive an advance out of the guarantee fund, free of interest, up to a maximum of 80 % of the amount. The advance is granted by the Minister of Agriculture, after consultation with the National Agricultural Credit Bank. It is repayable as payments are obtained from the defaulting society.

Apart from the subsidy contemplated by this law and within the limits of the credit inscribed each year for this purpose on the budget of the Ministry of Agriculture, subsidies may be granted to mutual agricultural insurance and re-insurance societies.

These subsidies may be either:

(1) Direct subsidies by way of contribution towards the initial expenses of establishment and, further, to facilitate the formation of reserves.

These are allotted according to scales approved by decree, which take account of the effort made by the societies themselves to form reserves, of the local subsidies they have been able to obtain and, when required, of the amount of the losses.

(2) Supplements to the interest on the loans granted by the regional agricultural credit banks.

These supplements to interest can only be granted to societies which have been in existence for less than fifteen years at the time when the loan is made. They cannot, moreover, exceed 2 ½ per cent. during the first seven years of the loan nor 1 ½ per cent. during the following eight years.

To be able to take advantage of these supplements to interest, the documents attesting the loans must state that they have been granted in conformity with the provisions of the Finance Law.

Further, out of the credit inscribed each year on the budget as contemplated by this law, a grant may be given to any person who proves that he had been inscribed on the register of the tax on total income for the preceding year as having a taxable income of less than 30,000 francs and who has taken out a policy of insurance against hail in respect of crops grown in districts where the risk is particularly severe; this grant represents a contribution by the State to his insurance premium.

The list of these districts with the indication for each of them of the rate of the grant to be given is drawn up by the Minister of Agriculture.

This subsidy is fixed in advance as a percentage of the capital assured. It is progressive according to the gravity of the risk. It is fixed every three years by a Decree of the Minister of Agriculture after consultation with the Committee for the Distribution of Grants at the Ministry of Agriculture.

After a period of five years from the promulgation of the law in question, failure to insure will involve the deprivation of all assistance and of all remissions of taxes for losses of crop on account of damage by hail.

Insurance is taken out either with a local mutual society working in conformity with the provisions of the Law of 4 July 1900 or with a private insurance company, the scale of premiums of which have been approved by the Minister of Agriculture.

Lastly this Law set up a Relief Fund (*Caisse de Solidarité*) as a provision against agricultural calamities.

Out of this Fund grants are given:

(*a*) to persons who have suffered losses in capital or in crops attributable to agricultural calamities contemplated by the Finance Law of 30 December 1928;

(*b*) As a transitory measure during a period of five years, to farmers whose crops have been damaged by hail but who are not yet insured in the conditions contemplated by the Finance Law.

The resources of this Fund have been formed, until such time as special funds have been assigned to it, by credits inscribed on the Budget.

The Law laid down that Orders of the Minister of Agriculture, approved by the Minister of France, are to fix the percentage of the subsidies to be given to persons who have suffered losses in proportion to the losses and within the limits of the available resources of the Bank.

This Law made important changes in the methods followed up to then in regard to agricultural calamities whether in order to encourage hail insurance or to aid the victims of disasters due to the weather by the giving of grants.

A Circular of the Minister of Agriculture, dated 29 October 1932, drew the attention of the Prefects not only to the provisions of the Law but also to the desirability of taking steps with a view to the development of this kind of insurance. This Circular emphasises the fact that whereas the capital assured amounted to 8,000 million francs in 1932, this figure is inadequate if it is compared with the aggregate value of the crops threatened with destruction by hail, which reaches a much larger figure. It is necessary, therefore, to encourage as effectively as possible insurance against hail. In all the regions

where damage by hail attains serious proportions, it is desirable in the first place to promote the establishment of regional or departmental re-insurance societies in conformity with the provisions of Article 129 of the Law of 31 March 1932. The Circular adds that the prefects must not fail to point out to the interested parties, in order to induce them to form these societies or to join them in large numbers, that insurance against hail is all the more imperatively necessary as the relief grants would be progressively reduced in the course of the following five years and would then be suppressed as far as insured farmers were concerned, and that the same would be the case in regard to remission of taxes (1).

Under the terms of the Decree of 18 March 1933 on the organisation and working of agricultural mutual societies for insurance against hail which apply for State subsidies (2), agricultural mutual insurance and re-insurance societies, in order to obtain direct subsidies from the State must conform to the Law of 4 July 1900, to the Finance Law of 31 March 1932, to the Decree of 2 August 1923 as amended, to the Decree for the application of Article 134 of the Finance Law above-mentioned, and to the Decree of 18 March 1933 itself.

The same Decree lays down that the subsidies towards the payment of the initial expenses of formation which local societies can obtain must be fixed, having regard, in particular, to the number of members actually insured and to the amount of the subsidies obtained from the local administrative and other bodies and from individuals, in conformity with the scale appended to the Decree in question. The subsidies towards working expenses are fixed having regard to the number of new members actually insured in the course of the preceding year, to the amount of the contributions retained by the local society, to the balance of losses of which it assumes the risk, to the amount of local assistance obtained, all within the conditions fixed in the scale appended to the Decree.

The departmental or regional agricultural mutual societies for the re-insurance of hail risks can obtain subsidies towards the payment of the initial expenses of formation or towards working expenses on the conditions laid down in the scales appended to the Decree.

The mutual agricultural re-insurance societies of the second degree may receive subsidies from the State the amount of which is fixed by the Minister of Agriculture, after consultation with the Committee on Agricultural Calamitie set up by Article 2 of the Decree of 22 October 1932, on condition that it only re-insures re-insurance societies which themselves conform to the provisions of the laws and regulations.

This Decree lays down that for a period of two years a franchise of at least 10 per cent. may be imposed on all assured persons. The same

(1) *Annales de la mutualité et de la coopération agricoles*, Paris, November and December 1932 p. 669.

(2) *Journal Officiel*, No. 70 (23 March 1933).

decree rendered this franchise obligatory after the period of two years has expired.

The following is the scale of subsidies laid down by the Law of 18 March 1933 for the various insurance societies.

Scale No. 1.

Subsidies towards the payment of the initial expenses of formation and towards the establishment of a reserve fund payable to local agricultural mutual hail insurance societies.

(1) 300 points for each communal society;
400 points for each society embracing several communes;
500 points for each cantonal Society.

(2) 10 points for each member actually insured;

(3) 10 points for each hundred francs of subsidies obtained from the General Council, from the Municipal Council or from any other public institution or from any individual as a free grant, up to a number of points not exceeding a tenth of the total number of points attributable under paragraphs 1 and 2.

No subsidy can be given to a society containing fewer than 7 members.

The maximum subsidy is 1,000 francs for communal societies, 1,200 francs for societies embracing several communes, and 2,000 francs for cantonal societies.

Scale No. 2.

Subsidies towards the payment of working expenses payable to local agricultural mutual hail insurance societies.

(1) New members – 25 points for each new member actually insured during the preceding year;

(2) Contributions retained by the local society — 5 points per 100 francs of contributions;

(3) Balance of losses the risk of which is assumed by the local society – 10 points for each hundred francs of balance of losses;

(4) 10 points for each 100 francs of subsidy obtained from public institutions or from private individuals up to a number of points not exceeding a tenth of the total number of points attributable under paragraphs 1, 2 and 3;

Maximum:

(*a*) absolute maximum:

	Vines	Cereals	Mixed crops
Cantonal societies	1,500 fr.	800 fr.	1,200 fr.
Societies embracing several communes .	1,000 »	500 »	800 »
Communal societies	500 »	300 »	400 »

(*b*) relative maximum: 20 per cent. of the total contributions

Scale No. 3.

Subsidies towards the payment of initial expenses of formation and for the establishment of a reserve fund payable to regional agricultural mutual societies for the re-insurance of hail risks.

(1) 3,000 points for initial expenses of formation;

(2) 30 points for each member actually insured or re-insured;

(3) 10 points for each hundred francs of subsidies obtained from public institutions or from private individuals, up to a number of points not exceeding a tenth of the total subsidies.

Scale No. 4.

Subsidies towards the payment of working expenses payable to regional or departmental agricultural mutual societies for the re-insurance of hail risks.

(1) New members - 100 points for each member actually insured or re-insured since the last previous subsidy;

(2) Total contributions - 10 points for each hundred francs of total contributions paid by the assured persons;

(3) 30 points for each hundred francs of the balance of losses the risk of which is assumed by the society;

(4) 10 points for each hundred francs of subsidies obtained from public institutions or from private individuals, up to a number of points not exceeding a tenth of the number of points attributable under paragraphs 1, 2 and 3.

Maximum for regional societies, 250,000 francs.

Maximum for departmental societies, 100,000 francs.

In any case, the subsidy cannot exceed 75 per cent. of the contributions received for reinsurance.

Minimum for all re-insurance societies, 3,000 francs.

As to the subsidies contemplated in Articles 134 and 135 of the Finance Law of 31 March 1932 in favour of certain farmers who are inscribed in the register of the general tax on income for a sum of less than 30,000 francs and have taken out insurance policies in respect of certain crops situated in regions where the risk of damage by hail is particularly severe, a Decree of 10 May 1933 (1) laid down the conditions of granting these subsidies, that is to say the share which the State contributes to the hail insurance premiums. Decrees issued every three years on the proposal of the Minister of Agriculture and after consultation with the Committee for Agricultural Calamities are to fix the list of the communes, where the risk assumes a calamitous character; these areas are divided into classes called stages (*paliers*) in the ascending order of the seriousness of the risk, in each of two large groups of crops: wheat and similar crops, and vines and similar crops. The first group comprises: (*a*) cereals (wheat, meslin, rye, oats, barley, winter barley, spelt, buckweat, maize, sorghum, etc.); (*c*) natural and artificial meadows, forage plants (beet roots, potatoes and other tubers) madder and mulberry leaves. The second group includes vines and other crops. In each group and for each stage, the triennial decrees determine the maximum rate of the State contribution as a percentage of the capital assured, as well as the upper and lower limits of rate of premium or contribution to be applied. Special limits may be fixed for certain special crops. The farmers in question, in order to be able to claim the State contribution,

(1) *Journal Officiel*, 13 may 1933

must be regularly insured in a mutual insurance society, with limited liability or in the form of a limited partnership, working in conformity with the Decree of 8 March 1922, or in an agricultural mutual insurance society working in conformity with the Law of 4 July 1900, the Decree of 2 August 1923 and the Decree of 18 March 1933 and duly re-insured with a departmental or regional society working in conformity with the same law and decrees, itself re-insured with a society embracing the whole country, or, in the case of departmental or regional societies, with a society embracing the whole country.

The societies and re-insurance societies of the first type figure in a list fixed by Order of the Ministers of Agriculture and of Labour; those of the second type figure in a list fixed by Order of the Minister of Agriculture. The Orders in question must be issued after consultation with the Committee for Agricultural Calamities. At any time, Orders issued in the same form may modify the lists. However a society which has been inscribed in the list cannot be removed from it, except by its own consent or in case of urgency, after having been given the opportunity, with notice of at least 15 days, of being heard by the Committee for Agricultural Calamities, and the removal must be carried out by a special Order. To obtain inscription in the lists the societies in question must communicate to the Minister of Agriculture, solely in regard to the operations in respect of which the grants contemplated by the decree are given, the general conditions of their hail insurance policies as well as the hail insurance rates fixed, by stage and group, on the basis laid down by the triennial decree of which we have spoken. As long as the societies remain inscribed in the lists they are bound not to introduce any change into the policies or into the premium rates without the consent of the Minister of Agriculture. However changes in the scale of premiums, within the upper and lower limits contemplated by the triennial decree, in respect of the premium or the contribution in each group and each stage, may be made in case of necessity, provided the Minister of Agriculture is notified.

The same decree laid down that the policies or the rules must stipulate that the farmer must remain his own insurer for a small part of the capital assured, variable according the communes and the risk, according to the classification indicated and in conformity with the following table:

1st Group (Wheat and similar crops)		2nd Group (Vines and similar crops)	
Stage	Franchise	Stage	Franchise
I	10 per cent.	I	10 per cent.
II	20 » »	II	10 » »
III	30 » »	III	15 » »
		IV	20 » »
		V	25 » »
		VI	30 » »

Every hail insurance contract signed prior to the publication of this decree, without franchise or with a franchise lower than that contemplated by the decree in question for the same stage and the same group of crops could be cancelled in 1933 as from the date of application, at the request of the assured person, on the condition that it was replaced by an analogous contract which conforms to the Decree in question. The franchise fixed in conformity with these provisions cannot be suppressed in any case or in any manner.

The Decree of 10 July 1933 fixed for certain communes the rate, as a percentage of the assured capital, of share contributed by the State to the hail insurance premiums and contributions, that of the compulsory minimum franchise as well as the upper and lower limits of the rates of premiums or contributions, for three years at the figures indicated below, according to the group to which the crops considered belong and according to the stage in which they are classed, by reason of the gravity of the risk in the communes indicated in the Decree:

Stages	Gross rates of contributions or premiums	Minimum Franchise	Reduction	Rate of the State contribution
	Percentage of the capital assured	Percentage	Percentage	Percentage of the capital assured
	1st Group (Cereals, etc.).			
Stage I	3.50 to 5.00	10	15	0.75
» II	5.00 to 7.50	20	25	1.00
» III	7.50 and upwards	30	40	1.00
	2nd Group (Vines, etc.).			
Stage I	8.00 to 10.00	10	15	1.00
» II	10.00 to 14.00	10	15	1.50
» III	14.00 to 18.00	15	20	2.00
» IV	18.00 to 24.00	20	25	2.00
» V	24.00 to 32.00	25	30	2.00
» VI	32.00 and upwards	30	40	2.00

The same Decree laid down that an Order of the Minister of Agriculture shall fix, by classes of crops, the limits within which the rates of premiums or contributions to be applied in each policy may vary, having regard to the rate of franchise adopted, and on the basis of the gross rate of contributions or premiums above indicated.

The number of classes of crops has been fixed at five (three for the first group and two for the second). The basic gross rates may, for the calculation of the limits within which tariffs can be fixed, be increased by as much as 100 per cent. for the second class and 200 per cent. for the third class (1st group).

According to the same decree, in 1933 in the second group only the assured persons of stages No. 2 and upwards could obtain the State contribution.

In conformity with an Order of the Minister of Agriculture dated 13 August 1933 the limits between which the rates of premiums or contributions to be applied in each policy may vary have been fixed as follows in the case where the franchise is the minimum allowed by the regulations. (1)

1st Group.

		Percentage
1st Class:		
Stage	I	3.00 to 4.25
»	II	3.75 to 7.75
»	III	4.50 and upwards
2nd Class:		
Stage	I	6.00 to 8.50
»	II	7.50 to 11.50
»	III	9.00 and upwards
3rd Class:		
Stage	I	9.00 to 12.75
»	II	11.25 to 17.25
»	III	13.50 and upwards

2nd Group.

		Percentage
2nd Class:		
Stage	I	6.75 to 8.50
»	II	8.50 to 12.00
»	III	11.25 to 14.50
»	IV	12.50 to 18.00
»	V	16.75 to 21.00
»	VI	19.25 and upwards

For both classes, in case of acceptance by the assured person of a franchise higher than the franchise laid down by the regulations, the limits above fixed have been reduced in a corresponding proportion.

The principal crops to be insured have been placed in the various classes of the two groups as follows:

1st Group.

1st Class. — Wheat, millet and sorghum, madder, mulberry leaves, natural grassland; sainfoin, clover, lucerne, not grown for seed; sugar beet and beet grown for fodder, potatoes, with the exception of early potatoes.

2nd Class. — Rye, spelt, meslin, oats, barley, maize and rice, winter fodder cultivated exclusively for fodder.

(1) *L'Argus*, 27 August 1933.

3rd Class. — Buckwheat, rape, poppies, camelina and mustard, flax and hemp, beet, cabbage, radishes, carrots, onions, and parsnips cultivated for seed; beans, lentils, haricot beans, vetches, vetchlings, as well as peas intended to be gathered green; and other leguminous plants when cultivated for seed.

2nd Group.

4th Class. — Vines, hops and saffron.

5th Class. — Market garden crops, fruit, flowers, etc.

As to the relief grants which the Finance Law of 1932 assigns not only to persons who have suffered losses in capital and crops attributable to atmospheric calamities other than hail (frost, floods, windstorms) which are not covered by insurance, but also to farmers who have suffered losses due to hail, but are not yet insured under the conditions contemplated by the Law of 1932, the Circular of the Minister of Agriculture dated 29 October 1932, already mentioned, draws the attention of the prefects to the measures to be taken, and at the same time explains that the legislature deemed that it was necessary to allow farmers who had suffered losses by hail also to benefit during the period of five years, which must elapse before the practice of hail insurance could become general. It will be of interest to indicate here some of the measures taken in application of this part of the Finance Law of 1932.

The Decree of 13 October 1934 (1) on the grants assigned by the Relief Fund to the victims of agricultural calamities, which replaces that of 7 April 1933 in application of the Finance Law of 31 March 1932, lays down that a relief grant may be made to farmers whose taxable income, as it figures in the register of the general tax on income, for the year preceding that in which the loss occurred, did not exceed 30,000 francs, when their crops or their capital invested in agricultural production are damaged by windstorms, floods, frost or hail, under the conditions contemplated by the articles that follow. This grant can never become an established right for the person who has suffered loss; the making of it is always subordinated to the existence of credits voted by Parliament and placed at the disposal of the Relief Fund and to the amount of such credits.

The relief grants, when given in respect of standing crops, are applied for by the farmer, and the order is made out in his name; if the farmer is a tenant, the landlord is notified that the grant has been ordered.

When the grant is in respect of capital destroyed:

(*a*) If the capital in question consists of animal or vegetable products produced on the farm, of manures, etc., of furniture, of personal effects, of outdoor or indoor farm implements, or of live stock, the grant is applied for and ordered as above.

(*b*) If the capital damaged consists of immovable property such as farm buildings, soil, land and agricultural improvements, roads, permanent planta-

(1) *Journal Officiel*, 16 October 1934.

tions, forests, etc., the grants are applied for by the owner of the property and the order is made out in his name, subject to the rights, if any, of the tenant, who is notified that the grant has been ordered.

In the case of métayage, the grants may be applied for either by the métayer or by the landowner, or by both jointly, if the damage is to crops or to capital owned in common; the order is made out in the name of the landowner and the métayer is notified.

If, however, the income as it figures in the register of the general tax on income of only one of the two parties exceeds the maximum of 30,000 francs contemplated by the first article of the Decree, the other party receives, in respect of damage to property jointly owned, a fraction of the grant corresponding to his share in the products of the farm as determined by agreement or by custom.

The Ministerial Order of 18 October 1934 (1) replacing that of 13 April 1933 lays down that the relief grants set up in favour of the victims of agricultural calamities by the Law of 31 March 1932 (Article 136) and regulated by the provisions, outlined above, of the Decree of 22 October 1932 (Article 6) and of the Decree of 13 October 1934, shall be calculated within the limits of the credits voted by Parliament for this purpose, in conformity with the following provisions.

When the damages in question are damages to standing crops or to property of the kinds enumerated in paragraph (*a*) of Article 2 of the Decree of 13 October 1934, if the ascertained amount is less than 500 francs or less than 20 per cent. of the value, at the date of the damage, of the crops or of the property of the same kind in the farm that has suffered damage, no grant can be given. If, however, the total amount of the damages exceeds 15 per cent. of the average value of the whole of the products of the farm in a normal year, a grant may be given.

For the damages caused to immovable property contemplated in paragraph (*b*) of Article 2 of the Decree of 13 October 1934, if they are less than 500 francs or do not exceed 15 per cent. of the approximate selling value of the property forming the farm, they are not taken into consideration.

For isolated immovable property, plots of land, buildings, etc., not forming a farm, the minimum of 15 per cent. will be calculated on the approximate selling value of the whole of the immovable property devoted to agricultural purposes belonging to the same landowner in the same commune or in adjacent communes.

When, during the same crop year, a farmer has been successively the victim of several calamities, the damages caused may be accumulated and the farmer may be allowed to benefit by the relief grant if the total amount of the damages reaches the limits fixed as above.

The amount of the relief grant is calculated according to a uniform percentage, fixed each year by an Order of the Minister of Agriculture, issued on the recommendation of the Plenary Committee of Distribution, set up by

(2) *Journal Officiel* of 26 October 1934.

TABLE I. — *Statistics of the Operations of the Share Companies and Large Mutual Societies during the year 1934.*

Names of the companies and societies (In the order of date of formation)	Date of formation	Values assured	Premiums or contributions in 1934	Losses and costs of settlement	Surplus or deficit during the year	Reserve funds at end of 1934	Capital
			SHARE COMPANIES				
L'Abeille	1856	1,297,189,095	(1) 28,826,477	(2) 17,868,579	+ 2,439,750	16,786,000	4,800,000
La Confiance	1878	524,082,359	8,737,892	3,516,189	+ 1,650,000	7,638,216	6,000,000
La Rurale	1895	351,400,000	5,858,400	2,173,200	+ 3,685,200	(3)	4,000,000
La Protectrice (4)	1911	62,153,840	1,735,574	653,263	(3)	(3)	10,000,000
La Nationale (4)	1920	385,829,053	6,952,444	3,165,941	+ 2,260,763	(3)	10,000,000
Total		2,620,654,347	52,110,787	27,377,172	+ 10,035,713	24,424,216	34,800,000
			MUTUAL SOCIETIES				
La Cérès	1823	153,332,500	1,737,772	493,315	+ 482,643	3,223,470	
Société de Toulouse	1826	487,982,360	6,684,077	2,507,216	+ 2,730,139	10,759,110	
Mutuelle de Seine-et-Marne	1829	183,704,310	1,812,133	244,690	—	13,307,858	
Étoile	1834	270,728,700	4,404,090	1,855,592	+ 1,235,435	8,560,727	
Beauceronne Vexinoise	1849	67,415,900	482,256	87,595	+ 242,484	2,658,347	
Mutuelle de Seine-et-Oise	1854	73,815,200	397,770	79,883	—	1,128,360	
Garantie Agricole	1854	36,743,300	363,041	75,324	+ 328,057	1,987,073	
Régionale du Nord	1869	21,082,900	169,862	38,748	+ 80,132	505,190	
Gironde	1870	5,039,794	137,926	71,445	—	24,894	
Ferme	1887	89,537,656	1,880,127	1,127,993	— 38,657	191,319	
Ruche	1896	42,371,745	575,162	44,019	+ 151,817	4,265,514	
Mutuelle du Poitou	1908–14	10,553,903	139,269	15,364	+ 60,000	Those of other branches	
Total		1,442,308,268	18,783,485	6,641,184	+ 5,272,050	46,611,862	
			SUMMARY				
Compagnies par actions		2,620,654,347	52,110,787	27,377,172	+ 10,035,733	24,424,216	34,800,000
Sociétés mutuelles		1,442,308,268	18,783,485	6,641,184	+ 5,272,050	46,611,862	—
Total		4,062,962,615	70,894,272	34,018,356	+ 15,307,783	71,036,078	

(1) To which must be added 24,204,494 francs for premiums accepted as re-insurance. — (2) To which must be added 15,601,221 of losses on risks accepted for re-insurance. — (3) Not distinguished from those of other branches. — (4) Hail insurance is only a subsidiary branch. To the premiums must be added those of other branches.

Decree of 22 October 1932, regard being had, on one hand, to the amount of the credits inscribed in the budget.

In any case, the grant assigned to any one person cannot exceed 20 per cent. of the total amount of the losses suffered by him during the year, nor be less than the sum of 50 francs.

When the calculation of the grant made in accordance with the uniform scale as indicated above gives a sum exceeding the minimum of 50 francs fixed as above but other than a multiple of ten, the amount of the grant will be rounded as indicated below:

(1) If the calculation of the grant results in a figure equal to or exceeding a multiple of five, the amount of the grant will be raised to the next highest multiple of ten;

(2) If the calculation gives a figure which is lower than a multiple of five, the amount of the grant shall be reduced to the multiple of ten next below.

When the damages have been caused by hail, the grant calculated in the manner just described was reduced by one-third in 1933 and 1934; it will be reduced by two thirds in 1935, by three fifths in 1936 and by four fifths in 1937.

TABLE II. — *Statistics of the Operations of the Share Companies and of the Large Mutual Societies during the last 46 years.*

Year	Losses	Premiums and contributions	Values assured	Relation of losses to premiums %
1888	538,087,810	7,113,927	6,726,578	94
1890	602,834,132	8,044,770	5,655,384	70
1895	509,190,442	7,797,317	9,216,359	118
1900	634,960,908	8,897,943	6,714,908	75
1905	723,783,297	9,085,871	6,981,617	77
1910	948,886,532	11,779,914	7,607,373	64
1911	965,595,599	12,074,422	8,019,939	66
1912	1,011,828,865	12,769,102	8,240,580	64
1913	1,111,915,867	14,165,017	7,906,173	56
1914	1,043,503,005	14,414,013	7,188,368	49
1915	927,128,713	12,861,733	6,311,446	49
1916	938,510,419	13,591,365	9,850,359	72
1917	977,210,121	16,036,121	23,672,950	141
1918	1,621,729,265	23,775,121	14,755,418	61
1919	1,755,963,510	25,967,657	12,002,934	46
1920	2,869,436,723	42,083,563	26,066,036	62
1921	2,674,268,375	39,662,810	28,235,281	71
1922	2,707,988,343	43,687,466	19,469,258	44
1923	3,108,479,735	49,454,867	27,646,239	55
1924	3,178,800,209	53,243,900	40,349,436	76
1925	4,235,858,155	75,166,888	41,523,252	55
1926	5,313,732,201	98,997,019	56,056,310	56
1927	6,018,261,360	111,412,245	121,477,001	109
1928	6,256,102,847	117,927,254	91,289,945	77
1929	6,358,466,043	125,488,380	130,594,673	104
1930	5,722,192,048	117,391,643	84,081,439	72
1931	5,628,404,800	121,992,981	106,771,160	87
1932	5,886,394,157	124,711,999	59,773,774	47
1933	4,510,697,675	105,459,772	48,059,035	45

We give two tables (pages 383 and 384) one of which contains statistics of the operations of the share companies and the large mutual societies during the year 1934 (1) and the other contains statistics of the work of these companies and societies during the past 46 years (2).

In 1898, there only existed 12 agricultural mutual hail insurance societies. They had a membership of 16,812 and the capital assured amounted to 8,499,456 francs. In 1900, after the passing of the Law, there were 16 societies insuring 28,760 members for a capital of 13,841,656 francs.

The figures increase steadily up to 1909, in which year the maximum number of members, 47,337 is reached. There were at this time 24 local societies and the capital assured was 27,084,970 francs. This figure includes 7 departmental societies of tobacco-growers of which all persons who cultivate this crop are obliged to be members (3). During the war, the number of societies remained stable at 28, with 37,780 members and an assured capital of 31,524,892 francs.

Immediately after the war, several societies disappeared; in 1922 there were only 12 with a membership reduced to 14,461 and an assured capital of 17,892,444 francs. But from the following year a sharp reaction can be noted. The figures for 1923 are: 17 societies, 14,135 insured members, and 103,182,888 francs of assured capital. A new and very appreciable fall occurred in 1926, when there were only 6,451 members. A note explains that the decrease in relation to the preceding years results from the fact that in the previous statements a society not really on mutual lines (that of Dordogne) had been included. Moreover, in this same year a strong movement occurred for the formation of hail insurance societies, since the number rises in one year from 19 to 137. The following year there were 251, and in 1928 there were 379, with 11,237 members and an assured capital of 249,841,063 francs

However, in view of the fact that Parliament, by the Finance Law of 31 March 1932, granted State financial aid on a large scale to the insured persons and assigned credits and subsidies to the insurance societies it is very probable that future statistical tables will indicate a remarkable progress (4).

F. ARCOLEO.

BIBLIOGRAPHY ON ECONOMIC AND SOCIAL QUESTIONS

REICH. Dipl. Agr. Ing. Dr. Eduard Základy Organisâce Zemědělství Česko-slovenské Republiky (Les bases de l'organisation de l'agriculture en Tchécoslovaquie). (*Publikace Ministerstva Zemědělství ČSR*, Cislo 88. Praha 1934, pp. 800.

[For some time a slow but steady change from liberal to managed economy has been particularly noticeable in Czechoslovakian agriculture. This movement is directed by Dr. Milan HODZA, Minister for Agriculture, based on the numerous scientific

(1) *L'Argus*, 19 May 1935.
(2) *L'Argus*, 19 August 1934.
(3) VERMOREL, L'assurance contre la grêle, Paris, 1913, p. 19.
(4) BLANCHOIN, L'assurance mutuelle agricole, Paris, 1935, p. 147.

investigations made by the Czechoslovakian Academy of Agriculture and by the Institute for Agrarian Policy of that Academy.

The work by Dr. Reich contains all information, statistical and otherwise, which enables the reader to understand the structure of agriculture in Czechoslovakia and the conditions to which it should correspond in order that the principles of managed economy should be successfully applied.

The 1st part of this work refers to the natural conditions of production; the 2nd to economic conditions: politico-geographical conditions, transport questions, electrification, agrarian reform, etc.; the 3rd contains a study of prices and price fixing; in the 4th the writer discusses the individual as a factor in agricultural production and his interests from the social standpoint. The 5th part treats private organisation of agricultural production and contains several chapters on the areas devoted to different crops, on the influence of the size of farms, on the importance of live stock, etc. The 6th part describes the methods of farming; the 7th plant production; the 8th animal production; the 9th agricultural industries. The 10th part is devoted to origins and bases of progress in farming: agricultural research services, agricultural instruction, the agricultural press, agricultural organisations and co-operation, etc.; in the 11th the writer describes the development and value of agricultural production in Czechoslovakia during the years following the world war.

In the conclusion of the work it is shown to what extent it is possible to apply a scheme of agricultural production and improvement so as to assure a return on farming and on the work of the peasants based on statistical information which allows a comparison to be made between the different provinces, regions, departments and communes. A chapter is devoted to the relations between agriculture in Czechoslovakia and foreign countries and also the International Institute of Agriculture].

JEAN BRANDEJS: La Russie subcarpathique du point de vue agricole. *L'Est Européen agricole*, No. 13, April 1935. Paris.

[The author sets out the progress made by agriculture in this province of the Czechoslovak Republic since 1919 and the measures taken by the Government on behalf of the principal branches of agricultural economy].

PUBLICATIONS RECEIVED BY THE LIBRARY

Books.

General.

CASTILLÓN E. Ramiro. En defensa de la agricultura. Huesca, Campo 1933. 104 p.

DIRECTORY OF AGRICULTURAL AND HOME ECONOMICS LEADERS. 17th. Edition. 1935. Cambridge, Mass., W. G. Wilson, 1935, 800 p.

Bibliography.

HARWARD UNIVERSITY. BUREAU FOR ECONOMIC RESEARCH IN LATIN AMERICA. The economic literature of Latin America. A tentative bibliography. Vol. I. Cambridge, Harward university press, 1935. XVIII-315 p.

Sociology.

BRENTANA, D. La vita in un comune montano. Brescia, F. Apollonio 1934. [221] p. (Ateneo di Brescia. Supplemento ai « Commentari dell'Ateneo di Brescia » per l'anno 1933).

Statistics.

ANUARIO ESTADÍSTICO DE CEREALES 1935. Barcelona, J. M. Morgades, 1935. 127 p.

·GIJSELMAN & STEUP. Koffie statistiek voor Nederlandsch-Indie voor het jaar 1935. Soerabaia, 1935. 25 p.
[Coffee statistics of the Dutch Indies].

INTERNATIONAL FEDERATION OF MASTER COTTON SPINNERS' AND MANUFACTURERS' ASSOCIATIONS. International cotton statistics. Consumption of cotton for half-year ending 31st July, 1935. Manchester [Taylor Garnett Evans & Co.], 1935. 28 p.

UNION DES MARCHANDS DE SOIE DE LYON. Statistique de la production de la soie en France et à l'étranger. Récolte de 1934. Lyon, Rey, 1935. 34 p.

Political Science.

CHANG, YIN-T'ANG. The economic development and prospects of Inner Mongolia. (Chahar, Suiyuan and Ningsia). Shanghai, Commercial press, 1933. XIV, 243 p.

DOBBERT, C. L'economia fascista. Problemi e fatti. Firenze. G. C. Sansoni, 1935. X, 405 p. (Studi di politica ed economia).

DOBBERT, G. L'economia sovietica Firenze, G. C. Sansoni, 1935. XI, 361 p. (Studi di politica ed economia).

NOURSE, E. G. America's capacity to produce, Washington, Brookings institution, 1934. XIII, 608 p.

PATON, W. A. Corporate profits as shown by audit reports. New York, National bureau of economic research, 1935. VIII, 151 p. (Publications of the National bureau of economic research, inc., n. 28).

WEBER, A. Leitfaden der Volkswirtschaftspolitik. München, Duncker & Humblot, 1935. VIII, 206 p. (Leitfäden der Volkswirtschaftslehre).

YOUGOSLAVIJA. ZAVOD ZA UNAPREDJIVANJE SPOLJNE TRGOVINE, BEOGRAD. La Yougoslavie économique. Edition publiée par l'Office du commerce extérieur, Belgrade. [Belgrade, Impr. Minerva, 1935. 144 p.].

Rural Economics.

BOUVARD, G. L'agriculture dirigée aux Etats-Unis essai critique sur l'économie autoritaire. Paris, Librairie technique et économique, 1935. XV, 296 p.

ITALIA (DIREZIONE GENERALE DEL CATASTO E DEI SERVIZI TECNICI). Istruzione per la qualificazione, la classificazione e il classamento dei terreni e per la formazione delle tariffe d'estimo. Roma, Istituto poligrafico dello Stato, 1934. 161 p.

ROTH, H. A. Buchführung in der Landwirtschaft. Berlin, P. Parey, 1935. 167 p. (Thaer-Bibliothek, Bd. 122).

STEDEN, A. Die betriebswirtschaftlichen Grundlangen der Landwirtschaftsförderung. Wien, Niederösterreichische Landes-Landwirtschaftskammer, 1935. 205 p

Labour.

REINKE, H. Der deutsche Landarbeiter. Ein Kommen und Werden. Berlin, Reichsnährstand Verlag, [1935]. 72 p.

Internal colonisation.

HERBERT, G. Can land settlement solve unemployment ? London, Allen & Unwin. [1935]. 129 p.

Co-operation.

ALLGEMEINER VERBAND FÜR DAS LANDWIRTSCHAFTLICHE GENOSSENSCHAFTSWESEN IN OESTERREICH. Bericht über die Tätigkeit des Allgemeinen Verbandes für das landwirtschaftliche Genossenschaftswesen in Oesterreich im Jahre 1934. Tulln, F. Goldmann, 1935. 93 p.

VERBAND LANDWIRTSCHAFTLICHER GENOSSENSCHAFTEN VON BERN UND BENACHBARTER KANTONE. 46. Jahresbericht 1934-35. Bern, Verbandsdrückerei A.-G. 1935. 34 p.

POLIN, R Les coopératives rurales et l'État en Tchécoslovaquie et en Roumanie. Paris, F. Alcan, 1934. VII, 164 p. (Nouvelle bibliothèque économique Travaux du Centre de documentation sociale).

Insurance.

FEDERAZIONE NAZIONALE FASCISTA DELLE IMPRESE ASSICURATRICI. ROMA. Annuario italiano delle imprese assicuratrici 1935. Roma, 1935. 589 p.

Various.

ANUARIO DE LA GRAN BRETAÑA 1935-1936. XIª Edición. Trade and Travel Publication Ltd. 1935. XXVII-273 p

BLISS, H. E. A system of bibliographic classification. New York, H. W. Wilson, 1935. X-343 p.

BOWMAN, I. 1) Geography in relation to the social sciences. 2) CLARK, R. B. Geography in the schools of Europe. New York, Ch. Scribner's sons [1934]. XXII, 382 p. (Report of the Commission on the social studies, pt. 5)

COMMISSION ON CUBAN AFFAIRS. Problems of the new Cuba. New York, Foreign policy association, 1935. XI-523 p.

PIZZI, F. Italica gens. Repertori a stampa di biografia generale italiana. Cremona, G. Moschetti, 1934. 131 p.

TIBAL, A. La Tchécoslovaquie: étude économique. Paris, A. Colin, 1935. [224] p. (Collection Armand Colin, n. 183).

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MEAT IMPORTS AND THE LIVESTOCK INDUSTRY IN THE UNITED KINGDOM

(*Concluded*).

It has been seen that in July 1934 the Government of the United Kingdom, since no permanent policy in regard to meat imports had been agreed as the result of any consultations during 1933, was by the Ottawa Agreements pledged (*a*) to arrange for the continuance of the regulation of imports of foreign meat at the rates in force for the period April to June 1934, and (*b*) " in any action affecting the imports of meat into the United Kingdom which the United Kingdom Government may take on behalf of United Kingdom agriculture, " to have regard to the two objectives indicated in the Agreements, *viz.*, the maintenance and development of home production, and the granting to the Dominions of an expanding share of imports.

The statement issued by the Government of the United Kingdom on 11 July 1934, entitled " The Live Stock Situation, " showed that the action taken since November 1932 in regulation of meat supplies, although followed by an appreciable improvement in prices of sheep, had not brought about the desired improvement in the prices of cattle, and there had in fact been a continued decline.

To indicate the extent of these movements in prices we give a table (page 390) in continuation of Table II, bringing the figures up to June 1934.

In the statement of 11 July 1934 the United Kingdom Government indicated as an important factor in the situation the difficulty of regulating with exactness the total imports of beef coming on the home market, making necessary the consideration of further possibilities of regulation. Of these possibilities that regarded by the Government as the best long term solution was, as already stated, a levy on imports for the benefit of the home producer, together with some degree of direct regulation of supplies in the interests of all suppliers.

It should here be noted, as forming, as it were, the general key to the negotiations that followed, that on the one hand the United Kingdom is by far the largest importer of beef, veal and cattle in the world, and that the South American countries are the main suppliers, while on the other hand the United Kingdom is also by far the largest importer of mutton and lamb in the world but draws supplies mainly from Australia and New Zealand. A further important feature in the situation

in respect of the consuming market has been the contraction of the demand for frozen beef, which is the main form of beef export from the Dominion countries, in favour of chilled beef with a tendency to replace beef as an article of consumption by mutton, lamb and pork.

TABLE IV. — *Prices of English Beef and English Mutton in each month from July 1932 to June 1934 (shillings per cwt).*

	Beef 1932	Beef 1933	Mutton 1932	Mutton 1933
July	78s. 9d.	66s. 6d.	71s. 10d.	81s. 8d.
August	75s. 10d	65s. 4d.	68s. 1½d.	75s. 8d.
September	71s. 9d.	60s. 8d.	65s. 11d.	74s. 8d
October	64s. 2d	61s. 3d.	64s. 2d.	74s. 8d.
November	63s. 0d.	60s. 8d.	68s. 10d	81s 11d
December	75s 10d.	60s. 7d.	76s. 7d.	82s 0d
	1933	**1934**	**1933**	**1934**
January	74s. 8d.	68s. 7d.	85s 8d.	80s 11½d.
February	71s 2d	67s. 1d.	83s 8½d.	80s 1d
March	60s. 1d.	65s. 4d.	91s 7d	82s 8d
April	70s. 7d.	64s. 2d.	93s 11d.	97s 1d.
May	67s. 8d.	65s. 11d.	96s 8d.	114s 4d
June	66s 6d.	66s. 5d.	88s 8d.	109s 8d

As illustrating the respective extent of the interests involved, it may be added that out of a total value of chilled beef imports in 1934 into the United Kingdom of £13,812,042 the share of Argentina was £11,674,995 and that of all British countries taken together only £380,794. On the other hand out of a total of £5,090,098 representing the value of the frozen beef imports over the same period, the share of Argentina was £1,160,312, that of Australia £2,051,900 and of New Zealand £1,127,032, while in respect of mutton and lamb out of total of £17,549,332 the share of Argentina was £2,312,995, that of Australia £4,168,872 and that of New Zealand amounted to £10,131,151.

As a dominating factor in the proposals put forward it may be recalled that under the existing Agreements, *viz.*, the Ottawa Agreements with the Dominions, and the Anglo-Argentine Trade Agreement, no levy could be imposed withn the period of these agreements respectively, without the consent of the Governments severally concerned. In addition any regulation of imports presented problems of so serious a nature to certain of the Governments concerned that, in the opinion of the Government of the United Kingdom, it was essential to allow time and opportunity for further examination. Although in fact the Ottawa Agreement left

the Government free to regulate Dominion supplies as from 1 July 1934, the object of the United Kingdom was to arrive at an agreed programme and to avoid compulsory measures. Hence the action taken, following on the issue of the statement of 11 July on the "Live Stock Situation," was that of communicating proposals for discussion to the Dominion Governments, while they were at the same time informed—by way of reassurance—that as regards foreign suppliers, the following reductions, as compared with imports in the Ottawa basic year, would be made: for chilled beef, 10 per cent. for the first half, and 14 ½ per cent. for the second half of the third quarter, and 11 ½ per cent. in the fourth quarter; for frozen beef, veal, mutton and lamb, the 65 per cent. reduction of the imports of the basic year, as imposed for the period April to June 1934, would be continued.

Certain elements in the proposals thus communicated could not, in fact, fail to arouse serious concern among Dominion meat interests, more especially in Australia and New Zealand.

In the first place they marked the inauguration of a policy, so far deferred, of quota regulation of Dominion imports; in the second place, the restrictions on foreign supplies actually carried with them, so far as related to chilled beef, an automatic limitation of Dominion expansion of this export, since by the terms of the Anglo-Argentine Agreement, no reduction of more than 10 per cent. below the basic year imports could be imposed on Argentine chilled beef imports without a proportionate reduction in any Dominion supplies. The larger reduction imposed on Argentine shipments would thus involve a set-back to the efforts, to which much importance was attached, especially in Australia, at gradual replacement of frozen by chilled beef shipments.

In the third place, the proposals made clear the desire of the United Kingdom that any long term policy should include a levy on Dominion, as well as on foreign imports, for the benefit of the home producer, a proposal which, as will later appear, aroused very strongly expressed opposition on the part of Australia and New Zealand.

The reaction of the Dominions, especially marked in Australia, to the proposals of the United Kingdom, can be better understood by reference to Tables V, VI and VII which show the effects on imports of the policy pursued since the Ottawa Conference and the tendency towards expansion of the Dominion meat supplies to the United Kingdom since 1931.

Summarising these figures, the Ottawa basic year was a record in respect of Dominion supplies; during 1933 the level was on the whole maintained, and during 1934, with the expiry of the undertakings given respectively by Australia and New Zealand, the Australian supplies of all types of beef were steadily increasing, and there was a decided increase in New Zealand supplies of beef; in fact some 90 per cent. of the frozen beef imports were being supplied from the two Dominions.

On the other hand, although strenuous efforts were being made, especially in Australia, to develop the chilled beef export industry, the proportion of shipments from all British countries in 1934 remained less than three per cent. of the total shipments of chilled beef, *viz.*, 238,358 cwt. out of a total of 8,250,522 cwt., of which Argentina supplied 6,942,064 cwt.

In respect of mutton and lamb, however, the joint share of Australia and New Zealand in supplies to the United Kingdom had in 1934 increased to 80 per cent., as compared with 65 per cent. before the Ottawa Conference.

The protracted discussions that followed on the communication of the proposals to the Dominion Governments are proof alike of the intricacy of the questions involved, and of the cross-entanglement of interests, including those of the home producer, of the Dominion and other suppliers, and in part of manufacturers and others in the United Kingdom concerned in the trade with Argentina, and likely to be affected by curtailment of Argentine imports into the United Kingdom.

TABLE V. — *Imports of Chilled Beef* (*in cwts.*)

PERIOD	British Countries	Brazil	Uruguay	Argentina	TOTAL
July-Sep 1931	—	153,901	174,175	1,918,220	2,246,296
Oct.-Dec »	—	3,798	125,971	1,984,485	2,114 254
Jan.-Mar 1932	—	131,012	152,206	2,001,612	2,284,830
Apr.-June »	—	261,822	156,578	1,781,588	2,199,988
July-Sep »	7,004	88,256	90,033	2,021,817	2,207,110
Oct -Dec. »	3,132	—	103,739	2,001,615	2,108,486
Jan -Mar 1933	2,488	118,450	133,165	1,795,194	2,049,297
Apr.-June »	33,203	259,496	157,735	1,752,471	2,202,905
July-Sep. »	54,027	139,431	160,653	1,676,729	2,030,840
Oct -Dec »	55,068	—	108,432	1,729,859	1,893,859
Jan -Mar 1934	34,098	120,380	137,190	1,794,997	2,086,665
Apr -June »	51,011	251,291	182,713	1,689,839	2,174,854
July-Sep. »	55,873	137,425	136,826	1,692,760	2,022,884
Oct -Dec »	97,203	-	104,283	1,761,418	1,962,904
Jan.-Mar 1935	69,359	121,284	143,544	1,798,422	2,132,609

Up to the end of 1934 consultations with the Dominions were carried out by correspondence, the object being (*a*) to arrange a programme for the first quarter of 1935 regulating imports of meat (including frozen pork) into the United Kingdom, and (*b*) to outline a long term policy. The actual trend of the discussions was not made fully public but the difficulty of arriving at a long term solution became increasingly apparent. It may serve to illustrate the general state of tension that considerable feeling was aroused in Australian meat circles by the report of a proposal, intended temporarily to ease the situation, for suspension from 15 November to 15 January, actually the slack export season, of the export of beef and veal.

The agreed programme for the first quarter of 1935 was at last published on 16 January and was as follows (page 395), the basis taken being the average of imports in the first quarters of 1932, 1933, and 1934.

TABLE VI. — *Imports of Frozen Beef (in cwts.).*

PERIOD	Australia	New Zealand	Other British Countries	United States	Brazil	Uruguay	Argentina	Other Foreign Countries	TOTAL
July-Sep. 1931	438,098	70,753	(1)	8,970	(1)	41,100	110,419	(1)	731,303
Oct.-Dec »	368,868	165,950	(1)	26,026	(1)	64,262	182,163	(1)	828,547
Jan.-Mar. 1932	166,638	51,853	2,978	16,057	17,693	49,660	199,795	1,158	505,832
Apr.-June »	156,426	88,642	3,591	7,503	20,375	42,940	119,312	382	439,171
July-Sep. »	375,894	276,202	6,023	6,684	16,716	72,739	163,537	58	917,843
Oct.-Dec. »	259,273	162,184	12,116	17,222	43,929	31,954	172,797	3,129	702,604
Jan.-Mar 1933	170,623	79,425	14,078	7,500	24,204	39,781	268,703	16	604,330
Apr.-June »	200,245	224,129	12,144	7,132	29,767	18,485	159,313	5	651,220
July-Sep. »	447,737	326,022	24,389	14,642	46,229	29,735	127,307	—	1,016,061
Oct.-Dec » . . .	342,963	77,132	29,384	21,013	5,403	32,953	151,480	3,199	663,527
Jan.-Mar. 1934	210,786	248,929	17,843	19,788	13,851	18,821	166,695	—	696,704
Apr.-June »	323 017	243,753	7,650	11,204	36,512	18,546	127,684	—	769,266
July-Sep. »	659,506	262,421	19,882	13,797	25,819	21,702	103,957	—	1,107,084
Oct.-Dec. »	379,863	179,662	62,626	33,528	8,094	29,773	145,868	3,638	843,052
Jan.-Mar. 1935	185,563	144,589	30,444	16,770	15,107	17,180	161,920	9	571,582

(1) Separate figures not available. Imports from all countries other than Australia, New Zealand, United States, Uruguay and Argentina were 61,963 cwts in July-September 1931 and 21,278 cwts. in October-December 1931.

TABLE VII. — *Imports of Frozen Mutton and Lamb (in cwts.).*

PERIOD	Australia	New Zealand	Other British Countries	Chile	Uruguay	Argentina	Other Foreign Countries	TOTAL
July-Sep. 1931	271,618	1,149,598	(1)	(1)	18,797	315,738	(1)	1,829,216
Oct.-Dec. »	722,238	538,061	(1)	(1)	66,695	289,560	(1)	1,629,463
Jan.-Mar. 1932	315,071	790,930	—	—	75,434	439,355	16,418	1,637,208
Apr.-June »	181,174	1,429,465	481	248,450	35,839	351,440	1,320	2,248,169
July-Sep. »	123,335	1,258,478	240	51,518	33,717	346,140	2,681	1,816,109
Oct.-Dec. »	536,454	436,992	328	610	18,700	248,785	20,892	1,262,761
Jan.-Mar. 1933	497,043	843,405	2,314	—	44,282	410,609	9,901	1,807,554
Apr.-June »	271,003	1,249,016	—	192,339	42,101	307,704	2,171	2,064,334
July-Sep. »	152,873	1,318,347	20	55,120	31,155	288,222	3,134	1,788,871
Oct.-Dec. »	388,368	357,805	825	—	54,689	218,120	12,035	1,042,932
Jan.-Mar. 1934	455,165	772,703	—	—	39,231	319,674	12,546	1,586,773
Apr.-June »	406,795	1,204,100	—	167,856	32,253	217,777	2,301	2,031,082
July-Sep. »	352,660	1,070,343	85	50,423	4,592	211,161	2,204	1,697,468
Oct.-Dec. »	416,426	502,291	157	—	62,314	174,498	13,492	1,169,178
Jan.-Mar. 1935	499,401	846,565	—	—	47,720	276,930	15,066	1,685,682

(1) Separate figures not available. Imports from all countries other than Australia, New Zealand, Uruguay and Argentina were 73,465 cwts. in July-September 1931 and 12,909 cwts. in October December 1931

	Beef and Veal cwt.	Mutton and Lamb cwt.	Pork cwt.
Australia	187,000 (1)	450,000	16,700
New Zealand	160,000	800,000	75,000
Canada	19,250	—	8,600
Union of South Africa	17,000	—	—
Southern Rhodesia	51,000	—	—

(1) Including 30,000 cwt. of chilled beef.

At the same time it was announced that as regards foreign sources of supply, imports of chilled beef would stand at the level of 90 per cent. and imports of frozen carcase and boned beef, and of mutton and lamb at 65 per cent. of the quantities imported in the corresponding quarter of the Ottawa basic year. It will be seen that by so fixing the percentage for chilled beef, reduction of Dominion imports of this type of meat was avoided, at least for the time being.

It is presumed that this basis of the average of imports in the corresponding quarters of 1932, 1933, and 1934 is regarded as the basis for the quotas fixed for respective countries in the succeeding quarters of 1935.

It had by this time become evident that the discussions on the long term policy were not making satisfactory progress, at least in Australia. The Federal Prime Minister stated early in January in the course of a public address that " the Federal Government does not concur in any plan which destroys Australia's opportunities of continued expansion as a meat exporter to Britain. " It was announced on 17 January that it had been agreed to postpone framing a long term policy for direct discussion in London with the Prime Minister and other Australian representatives who would leave Australia in February in view of the opening of the discussions in March.

On 6 March there was issued and communicated on the same day to the Governments of the Dominions and to the Government of Southern Rhodesia a " Statement of the Views of the Government of the United Kingdom, " relating to the imports of meat into the United Kingdom. Reference was made to the statement issued on 11 July 1934 on the " Live Stock Situation " in which attention had been called to the decline in prices of cattle and to the position of the home producer of beef. It was indicated that the continuance of the situation was to be accounted for by the expansion of overseas production. It was further pointed out that it is an essential interest of the United Kingdom to maintain a substantial export of coal and manufactured goods to foreign countries, as not even the major part of these exports can be absorbed within the Empire, and in consequence an equivalent in imports from foreign countries must be maintained. On examining the effects of the reductions in meat imports arranged by the Ottawa and the Anglo-Argentine Agreements respectively, it appeared that in 1934, as compared with the Ottawa basic year, total foreign imports of all meat (not pork) decreased by 13.55 per cent. (1,581,000 cwt.), while total Empire im-

ports increased by 16 per cent. (1,123,000 cwt.), or a small net decrease of 456,000 cwt.; on the other hand, taking beef and veal, chilled and frozen, foreign imports had decreased by 9.64 per cent. (942,000 cwt.) while Empire imports had increased by 81 8 per cent. (1,338,000 cwt.), a small net increase, Hence in the case of beef, the various measures were merely palliative, and the further decline in beef cattle prices in the United Kingdom necessitated the continuation for a further short period of the present Exchequer subsidy under the Cattle Industry Act (1). It was stated finally that the Government had no intention of continuing the subsidy indefinitely, nor of acquiescing in the ruin of the home live stock industry. Hence the following is the statement of the policy proposed:

" (1) It is the firm intention of His Majesty's Government in the United Kingdom to safeguard the position of the United Kingdom live stock industry.

" (2) Having regard to the terms of the Ottawa and Argentine Agreements, the only practicable means at present available to them for this purpose is a drastic reduction of imports of meat into the United Kingdom from all sources.

" (3) If, however, the consent of the Dominions concerned, of Southern Rhodesia, and of Argentina can be obtained to the necessary variation of their respective Agreements, it would be possible to deal with the situation by the imposition of a levy upon imports of meat into the United Kingdom with or without a measure of supply regulation.

" (4) The policy which His Majesty's Government in the United Kingdom desire to bring into operation as soon as they are in a position to do so is to assist the United Kingdom live stock industry, according to the needs of the market, from the proceeds of a levy on imports (with a preference to the Dominions), overseas producers being left free to regulate their exports to this market themselves.

" (5) The question therefore arises whether with the consent of the Government concerned a levy should be imposed upon imports forthwith, as an alternative to the drastic reduction of imports which would otherwise be necessary.

« (6) If so, the following further questions arise —

(*a*) Whether all import regulation should cease as from the date on which the levy comes into operation, or whether there should be a transitional period, after the imposition of the levy, during which a moderate degree of import regulation would be maintained.

(*b*) Whether the levy should be imposed on all meats or only upon beef, veal, and live cattle, bearing in mind that, in the latter case, a higher rate of levy may be necessary than if the levy were applied over the whole field of imported meat and that it would also be necessary to ensure that imports of lamb, mutton, and pork are adequately controlled. "

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(1) It was recalled in this document that at the time of the passing of the Cattle Industry (Emergency Provisions) Act in 1934, it was intended that any payments made under its provisions should be recoverable from the proceeds of an eventual levy on meat imports.

It will be seen from this statement, that the United Kingdom so far modified the recommendations, in respect, that is, of the long term solution of the meat imports problem, as to urge a levy alone (with preference for the Dominions) instead of, as in July 1934, a levy "with some degree of direct supply regulation in the interests of the suppliers." In correspondence with Australia during the autumn of 1934 there had been reaffirmation of the July recommendation, and it appeared that reliance had been placed in Australia on the maintenance of this view on the side of the United Kingdom. This is the explanation of the wording of the Australian reply, received by cable in London on 7 March, to the "Statement" of 6 March, which was to the effect that "the Commonwealth is prepared to adhere to the previously expressed agreement to a levy on all meat imported into the United Kingdom with satisfactory preference to the Dominions, *provided that existing restrictions on foreign meat are retained*, but will not agree to a plan which will give the Dominions a ½ d. preference in the levy, but does not impose quantitative restrictions on foreign meat."

This reply clearly reflects the Australian apprehension of being insufficiently protected from competition from Argentina, where trading is facilitated not only by the shorter distance from the United Kingdom but also by a depreciated currency.

On 9 March the High Commissioner for New Zealand voiced the view of his country in a reasoned reply stating that New Zealand was unable to support voluntarily the principle of a levy in view of the fact that the meat exports of New Zealand mainly directed to Great Britain represent one fourth of the total exports. It was further pointed out that the problem in the United Kingdom relates to beef, while New Zealand's share in beef imports is not such as would substantially affect the situation. Consequently the imposition of a meat levy would inflict severe and undue hardship on the sheep industry, as the mutton and lamb producers would thereby be heavily penalised to assist in the solution of what is essentially a beef problem.

The New Zealand Government accordingly requested that the question should be submitted to a formal conference and expressed willingness to send representatives.

The situation in March 1935, pending the arrival of the Australian delegation, was thus that the United Kingdom was faced with a refusal on the part of the Dominions to waive their right to reject a levy, prior to the expiry of the Ottawa Agreement, or voluntarily to accept quota restrictions. On the other hand the United Kingdom was reluctant to exercise the right to impose restrictions in face of Dominion opposition.

The suggestion of a formal Dominions conference made by New Zealand was accordingly taken up, and a date fixed for the end of May, by which time the New Zealand representatives could arrive in London. Arrangements were also made for representatives of Canada, the Union of South Africa, and of Southern Rhodesia to take part. In the meantime discussions with the Australian delegates were to proceed as constituting a preliminary conference.

As regards opinion in Australia, it may here be noted that it was held in some circles that a certain measure of regulation of meat supplies might well be in the

interests of the suppliers. The maintenance of remunerative meat prices was seen to be as much in the interest of Australian as of British producers, and it was recognised that controlled supplies of lamb and mutton from New Zealand and Australia had undoubtedly lifted prices in 1933 and 1934 (1).

By this time the meat export trade in Australia was awaiting the announcement of the quotas for import into the United Kingdom during the April to June quarter. Endeavours had been made in Australia to have the mutton and lamb quota fixed substantially higher than the 450,000 cwt. of the first quarter of 1935. The figure first put forward was as much as 700,000 cwt., but in view of a dry season which affected supplies, 500,000 was later proposed. The quota was finally fixed at 450,000 cwt., shipments of the corresponding quarter of 1934 not having exceeded 405,000 cwt. On the announcement of this maximum, it proved that nearly nine-tenths of this quantity was already afloat for arrival after 1st April, as a higher maximum had been anticipated. Accordingly the Federal Government, to avoid risk of stoppage at ports in the United Kingdom, temporarily suspended further shipments of mutton and lamb due to reach the United Kindgom before 30 June. The total beef quota for April to June was at the same time raised to 331,000 cwt., no change being at first made in the quantity of chilled beef to be included, *viz.*, 30,000 cwt. As shipments of chilled beef from Australia in excess of this quantity were already afloat to arrive after 1 April, a request was made to the British authorities to review this limitation and the question was referred to the approaching conference in London. It will be evident that this prolongation of a short term policy was causing serious inconvenience to the overseas meat shippers, especially in view of the late date of announcements.

The final agreed programme for the April to June quarter of 1935 may be shown in full as follows:

	Beef and Veal cwt. Chilled	Beef and Veal cwt. Frozen	Mutton and Lamb cwt	Pork cwt	
Australia	(a) 56,000	(a) 274,000	450,622	15,538	(excl baconers)
New Zealand	(a) 56,000	(a) 229,000	1,228,832	60,000	(» »)
Canada	4,500			4,220	
Union of S. Africa	(b) 15,000	3,500	—	—	
Southern Rhodesia	(a) 36,000	(a) 9,000	—	—	
Bechuanaland		(c) 7,500	—	—	

(*a*) Frozen may be increased at the expense of chilled. — (*b*) Not including an agreed "carry-over" of 35,727 cwt., if required, from period to 31 March 1935. — (*c*) Not including an agreed "carry-over" of 6,500 cwt., if required, from period to 31 March 1935.

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(1) The retail price of Australian mutton immediately prior to the 1932 Agreement was in Australia 2 ½*d.* and in Smithfield 4*d.* per lb.; in 1933 prices had risen to 4*d.* and 6*d.* per lb. on the respective markets, and have been maintained on this level.

On the arrival of the three Australian Ministers, a preliminary meeting was held in London on 25 March, and the first meeting for discussion of the problems was fixed for 1 April. The points for discussion were: (1) the short term policy, or the meat import programme for the second quarter, with special reference to the desired modification in the chilled beef quota from Australia; (2) a medium term policy to cover the period from 1 July to expiry of the Argentine Agreement in November 1936; (3) the long term policy after that date.

By 11 April the immediate question of the increase in the chilled beef quota for the second quarter was settled by raising the figure to 56,000 cwt. (included in total of 331,000 cwt.). The main concern of the Australian representatives was the definite extension of the possibilities of chilled beef importation into the United Kingdom.

Certain clauses, in fact, in the Anglo-Argentine Agreement act as a check on such expansion on the part of Australia, in that it had been therein agreed that while the United Kingdom might cut down Argentine imports of chilled beef by 10 per cent., this reduction could not be offset by imports from any other source, except in the case of the Dominions in the form of " reasonable experimental shipments. " Since in Australia development of chilled beef exports on a commercial scale is much desired and, in fact, seems to be becoming a practical proposition, a wide interpretation, pending the expiry in November 1936 of the Anglo-Argentine Agreement, of the phrase " reasonable experimental shipments " was essential and was pressed for by the Commonwealth representatives at the discussions.

No definite steps towards framing a medium term, still less a long term policy, could be taken, in advance of the discussions to be held with the Dominion representatives as a whole. These discussions were opened on 21 May, immediately after the arrival of the New Zealand delegation, under the presidency of the Secretary of State for the Dominions. New Zealand and Australia were represented by members of their respective Ministries, Canada, Union of South Africa and the Colony of Southern Rhodesia by their High Commissioners.

Mutton and lamb imports were taken as the subject of discussion for the first ten days, postponing the beef question.

Although no decision was reached a concrete suggestion emerged to the effect that, since foreign supplies of lamb and mutton actually for the first quarter of 1935, amounted to not more than 10 per cent. of the total imports (as compared with 20 per cent. in 1934), this percentage should remain, and that an Advisory Committee should be appointed to regulate the rest of these imports as between Australia and New Zealand. It was arranged that the representatives of these Dominions should meet to discuss this proposal further.

Pending the renewal of the discussion of the more difficult question of beef imports, the Government made it known once more that it was not the intention to continue the cattle subsidy indefinitely, and that, in view of the fact of the continued decline in prices of fat cattle (now 33s. per cwt. as compared with 34s. in 1934 and with 44s. in 1932) the policy of the levy as outlined in March would stand. This may be taken as meaning that the United Kingdom intended

to renew efforts to obtain the consent of the Dominions and of Argentina to the necessary variation in their respective Agreements, and that it was hoped that in this way imposition of any drastic quota regulations would be avoided. With this object the Argentine Government was invited to nominate delegates to discuss the position with the United Kingdom Ministers. The Ambassador of Argentina to Great Britain, a member of the Argentine National Meat Council, and other experts already in London were appointed.

The discussion on beef imports was resumed on 29 May, and on that day a meeting took place between the President of the Board of Trade and the Argentine Ambassador. On 31 May fresh proposals were put forward by the United Kingdom Government, with the significant modification that together with the levy as before there should be regulation of imports by agreement among all supplying countries. It will be noted that this proposal, while differing widely from any scheme of imposed reductions, whether drastic or milder, also differs from the proviso as worded in the White Paper of 6 March, *viz.*, " overseas producers being left free to regulate their exports to this market themselves. "

The discussions with the Argentina representatives in June were conducted privately, but it was understood that on the whole there was approval of the method above indicated of agreed regulation between all the supplying countries. Considerable satisfaction was caused in Australia by the statement that Argentina had consented to the proposal that the Dominions should be allowed to substitute chilled for frozen beef to the full extent practicable within the quotas, instead of " reasonable experimental shipments " only. As regards the levy proposals, it appeared probable that Argentina might agree to the levy if better quota terms could be offered up to November 1936.

It still remained doubtful whether the levy, when introduced, would apply to all meats, or to beef only, and to this uncertainty may be traced some of the difficulties in arriving at a long term policy. At the end of June it appeared that the Dominions were still holding out for a larger measure of preference, *viz.*, one farthing per lb. on Dominion meat as against 1 $^3/_4$*d.* on foreign meat. It has in fact been throughout the discussion the contention of the Australian delegation that while not denying the right of the United Kingdom to give first consideration to British producers, the Dominions should thereafter receive preference over the foreign suppliers. It has been pointed out, however, even in Australia itself, that such preference is only reasonable if the Dominions can supply a commodity as good—and in sufficient quantity—as the foreigner as regards beef. South American supplies of prime quality not only greatly exceed those of the Dominion in volume, but their regularity is guaranteed in a way which climatic and other conditions in Australia and in South Africa render impracticable at the present time, whatever may be the possibilities for the future.

As regards mutton and lamb it was subsequently made clear that no levy would be applicable in respect of New Zealand or Australian supplies, a decision which goes far to facilitate the attainment of a long term policy, although negotiations must inevitably be protracted in view of the extent of the interests involved.

It was recognised in July 1935 that it was improbable that the levy could be brought into operation before the expiry of the Anglo-Argentine Trade Convention in November 1936, Consequently it became essential to continue the Cattle Subsidy in any case to June 1936, at a cost of £3,000,000, and with provision for continuing up to 31 October 1936 at an additional cost of £1,333,000. The necessary authority was accordingly obtained for such extension.

Discussions and negotiations were thus finally concentrated on the medium term policy, or that of regulation of supplies of imported meat during the interim period, and especially of supplies from Dominion and other British countries.

On 15 July it was announced that an agreement had been reached in respect of the quantities of frozen mutton and lamb to be imported into the United Kingdom from Australia and New Zealand respectively during the last six months of 1935 and the whole of the year 1936. From 1 July to 31 December New Zealand will send 1,578,000 cwt., *i. e.*, the same quantity as was shipped in the corresponding period of 1934, and Australia will send 950,000 cwt., as compared with 768,000 in the corresponding period of 1934. During the whole of 1936 it was arranged that New Zealand would send 3,900,000 cwt. (in 1934, 3,555,000 cwt.), and Australia 1,750,000 cwt. (1,628,000 in 1294). It was however understood that, as regards 1936, provision would be made for adjustment in the light of later estimates of United Kingdom production and of the absorption capacity of United Kingdom markets.

The final arrangements in regard to the more complicated question of beef supplies from the Dominions and Southern Rhodesia were at last completed, but only in respect of the six months July to December of the present year. In regard to supplies of veal from Bechuanaland, a source of supply which has lately acquired importance, arrangements were also concluded.

The agreed programme of meat imports from the Dominions, Southern Rhodesia and Bechuanaland for the second half of 1935 may be shown in full as follows:

	Beef and Veal cwt		Mutton and Lamb cwt	Pork cwt.
	Chilled	Frozen		
Australia	(a) 160,000	(a) 990,000	950,000	28,700
New Zealand	(a) 66,000	(a-b) 412,000	1,578,000	(c) 140,300
Canada	108,400		200	14,300
Union of S. Africa	30,000	4,000	—	—
S. Rhodesia	—	91,000	—	—
Bechuanaland	—	15,000	—	—

(a) Frozen may be increased at the expense of chilled. — (b) Not including an agreed "carry-over" of 70,000 cwt., if required, from period April to June 1935. — (c) Excluding "baconers" for curing.

In connection with the imports of pigmeat, it may be added that in view of the increasing importance to Australia and New Zealand, especially to the latter, of the bacon export, in connection with the regulation of United Kingdom bacon supplies allocations of frozen pork for curing for the whole year 1935 have been made as follows: Australia 75,000 cwt., New Zealand 250,000 cwt.

There seems every reason to believe that the agreements reached are regarded as satisfactory by the Dominion suppliers, in particular by those of Australia and New Zealand, where the interests involved are of so vital a character to the prosperity of the farming population.

CAROLINE HUBBACK.

J. K. MONTGOMERY.

AGRICULTURAL CO-OPERATION IN SWEDEN

(Concluded)

4. — CO-OPERATION IN SLAUGHTERING AND THE SALE OF SLAUGHTER STOCK.

Next to milk and dairy products live stock and meat are the most important products of Swedish agriculture for the market, and represent about one fourth of the gross return from agriculture. The annual production of meat has amounted in the course of the last few years to nearly 300,000,000 kg., two-thirds of which have been placed on the home market. In the course of the five-year period from 1929 to 1933 the annual excess of exports for beef has been 300,000 kg., for pigmeat 22,000,000 kg., and for slaughter stock 2,500,000 kg.

Till quite recently co-operative activity in pig marketing and in particular in respect of live animals and meat has been much less than that of private trade. It is true that in Southern Sweden the development of the co-operative slaughterhouses, after the foundation of the first of them in 1899, was somewhat considerable, and that the greater part of the bacon export was in their hands, but still in 1932, when there were about 30 of these co-operative organisations with a membership of nearly 50,000, not more than 40 per cent. of the marketable surplus of the pigs produced on farms passed through them, and hardly 3 to 4 per cent. of the surplus of beef for the market.

At the present time, however, the conditions of organisation of the meat and the pig market are completely different. The work undertaken in 1933, with the help of the State subsidy for reorganisation of this market, in accordance with the scheme prepared by the General Agricultural Society of Sweden and under its direction, had good results. At the beginning of 1935 there were 170,000 farmers organised in co-operative slaughter associations and co-operative associations for the marketing of slaughter stock, that is to say, in primary organ-

isations which in their turn were enrolled as members of a central organisation covering the whole country, constituted in July 1933, as the *Sveriges Slakteriförbund* (Federation of Swedish Slaughterhouses).

The work of organisation is not yet finished, but it may be said that in the territories of Sweden which have a surplus production, about 80 per cent. of the production of beef and pigmeat is organised already on co-operative lines under the direction of the Federation (1). When the organisation of the Federation is complete, it is calculated that its annual sales will amount to between 50 and 60 million kilogrammes, that is, to about a third of the total quantity sold by agriculture on the national market, to which must be added the sales by the affiliated organisations on their respective local markets.

The Primary Organisations. — The main function of these is to engage in the wholesale trade in slaughter stock with the object of centralising the demand and supply at a single point, so as to avoid competition between producers. There are as already stated two types of these: the slaughter associations which from the beginning have had their own abattoirs, and the associations for marketing of slaughter stock which for the moment at least utilise for the slaughter of their members' animals other abattoirs already existing in their area. No very strict line of demarcation can however be drawn between these two kinds of organisation. If a marketing association gradually finds it advantageous to establish its own abattoirs and if with this object it increases its initial share capital, the difference between such an association and one for slaughter of stock disappears altogether. The sole difference in principle between the model rules drawn up by the General Agricultural Society of Sweden for the two types of organisation is the difference in the provisions in regard to the initial capital which is naturally fixed at a much higher sum for associations owning their abattoirs.

The most important provisions for the slaughter associations in the model rules are as follows:—

Membership is open alike to individuals and to organisations which within the area served by the association are engaged in the production of slaughter stock.

On joining the association a member pays for one share for each animal under 100 kg. dead weight, and two shares for each animal over 100 kg. which he is in a position to deliver each year to the association. The shares vary between 5 and 15 crowns and must be calculated in such a way as to cover the

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(1) Apart from the *Sveriges Slakteriförbund*, to which all the co-operative slaughterhouses are affiliated, there are besides two other co-operative organisations of slaughterhouses: the *Föreningen skånska andelsslakterier* (Association of Co-operative Slaughterhouses of Skåne) founded in 1925 and including among its members 11 co-operative slaughterhouses of the most southern province of Sweden; and the *Svenska exportslakteriernas förening* (Association of Swedish Export Slaughterhouses) founded in 1932 and including 19 co-operative slaughterhouses operating for the export trade. This last organisation does not itself engage in trade, its sole object being the improvement of the quality of Swedish bacon for export and the consequent necessary inspection of the export of bacon.

installation costs of the slaughterhouse, which should be met mainly from the share capital, and so that the funds required for working may be obtained without having recourse to private individuals as guarantors for the sums borrowed. A part of the shares is paid in cash at the time of joining the association, the remainder is paid by means of certain deductions, usually 2 öre per kg. of dead weight on the payments made for the live animals (1). Each member is bound under penalty to deliver to the association all the cattle intended for the market, the horses and sheep and all pigs over 30 kg. in weight. Sales to persons employed on the farm, as well as sales to other buyers, are however also authorised, on obtaining permission in writing from the Council of Management and in accordance with conditions laid down by that body. A member may not allow animals to be consigned in his name to the association by third parties, nor may he deliver animals purchased less than 14 days before consignment, unless a special understanding has been reached on this subject with the association. It should be noted that the obligation to deliver does not hold at the time of a complete realisation of stock or at the time of sale of breeding stock. Proof however may be required from a member that the sale of a breeding animal has really taken place. Payment for animals consigned to the association is made on the basis of yield and of grade. Membership of an association may be resigned at earliest two years from date of joining; with the permission of the Government the association may extend this period to five years. At the general meeting of the association, which is the supreme authority and which, *inter alia*, elects the Council of Management, consisting of from 5 to 11 persons, each member has a right to one vote.

After payments have been made to all members for the animals consigned in the course of the year, 20 per cent. at least of the profit remaining must be placed to the reserve fund, up to the amount of the initial share capital. When this amount has been reached the placing of further sums in this fund depends on the decision of the general meeting. In addition, one per cent. at least of the surplus should be placed in an education fund after which the remainder will be distributed to the members or utilised for promoting the interests of the association.

The central organisation of slaughter associations and of associations for marketing slaughter stock, the *Sveriges Slakteriförbund* (Federation of Swedish Slaughterhouses) is also an association without personal liability. Its object is to promote the economic interests of its members by marketing, as required, their surplus production in slaughter stock and derivatives; to act as intermedi-

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(1) In accordance with the model rules for the associations for marketing slaughter stock, each member pays, as entrance fee, in proportion to the requirements in capital of the association, from 20 öre to one crown per hectare of arable land worked by him or of permanent pasturage, as well as 2 öre per kg. of dead weight of animals. After a member has paid this latter charge over at least five years and when the accumulated total of his payments amount to at least 30 times his entrance fee, the general meeting of the association has the right to decide whether he should or should not continue to make these payments.

ary for the purchase of requisites for the slaughtering business, as well as to carry out any other activity of similar kind. The terms of constitution of the Federation prescribe, *inter alia*, that the Federation is to determine the sphere of activity of each affiliated association, to effect a price equalisation for the purpose of maintaining the national price level on the slaughter stock market, to work for payment according to quality, for improvement in quality and inspection thereof, for a uniform system of accountancy, business analysis and audit. In addition the Federation is expected to issue market price lists, and in all possible cases to protect the interests of producers of slaughter stock, and, in collaboration with other agricultural co-operative organisations, to endeavour to promote the co-operative movement in agriculture.

Membership of the Federation is open not only to slaughter associations and associations for marketing slaughter stock, but also to private slaughtering enterprises, provided that the purposes of the Federation are furthered by their admission as members. Every member pays on joining the association a share for each complete 10,000 kg. of beef or of pigmeat or of slaughter stock, calculated in dead weight, sold in the course of the last year of activity. Every share is for 20 crowns of which 5 crowns are paid in cash at the time of joining and the remainder in annual instalments of 5 crowns over three years. To cover the general expenses of the Federation such as are unconnected with its trading activity, every member must, in addition, pay an annual subscription fixed by the general meeting. This payment is not to exceed one öre per kg. of dead weight of beef or pigmeat or of slaughter stock, reckoned on dead weight, sold in the course of the previous year by the member.

As regards the duties incumbent on an affiliated association, the terms of constitution prescribe that surplus products which cannot be marketed in the area of activity of the association as fixed by the Federation, must be transferred to the Federation for export or for sale on the national market as decided by the Federation. If a member is guilty of any non-observance of this obligation or of the rules published by the Federation in respect of price equalisation, etc. the Council of Management may call for full or partial payment of the guarantee which each member has had to give the Federation for twice the amount of his share.

Membership of the Federation may be resigned at earliest only after two years from the date of joining; with the permission of the Government the Federation may prolong this period to five years.

Territories with joint interests have been grouped in districts by the Federation. Members assigned to a certain district have the right to one vote at the district meeting for each share which they have paid up to the Federation.

Among the main functions of the district meeting is the election of the District Council consisting of president, vice-president and district secretary. This council is expected to constitute a link between the members and the management of the Federation, to follow up activity in the district, to make proposals as to elimination of any faulty working, and to assist the management of the Federation in its work of propaganda and education.

The general meeting is the supreme authority of the Federation, and, *inter alia*, has to elect the Council of Management, consisting of from 7 to 11 persons; at this meeting each affiliated member has the right to one vote per share paid. As supporting the Council, when more important questions come up for consideration, there is an administrative council consisting of the presidents of the district councils referred to above.

In regard to disposal of the surplus profits of the Federation, the terms of constitution establish that at least 10 per cent. shall be placed to the reserve fund, until a sum equal to the initial share capital has been reached. It then depends on the general meeting of the Federation to decide if further sums are to be placed in this fund. If there is sufficient profit, it will be possible, on decision of the general meeting, to pay up to 5 per cent. interest on the shares fully paid up and after that the remainder may be constituted as a fund or used directly for the objects of the Federation.

The Federation of Slaughter Associations was formed, as already said, in July 1933, but did not begin working till the beginning of 1934 and in consequence has still not been able to effect much of its programme, its energies being mainly concentrated on increasing the membership. In the course of 1934, however, the Federation began to market pork and beef on the Stockholm market and in 1935 it has initiated a similar activity in the North of Sweden and in Gotenburg, and brought into operation a uniform system of payment, of classification and of price quotation throughout the country.

5. — Co-operation in the egg trade.

Egg production is the principal object of poultry-keeping in Sweden while the raising and fattening of poultry are of secondary importance. The greater part of the poultry slaughtered consists of hens which have ceased to lay and of cockerels. The present production of eggs, from about 6,000,000 hens in the country, is estimated at a total of 35,000,000 kg. per annum, 29,000,000 of which are sold, chiefly on the national market. The quantities exported vary considerably, but generally amount to from 2 to 5,000,000 kg. per annum. The total value of egg production is at present estimated at about 35,000,000 crowns and the value of poultry production at about 5,000,000 crowns.

The first local associations for the marketing of eggs were founded about 1880 and, at the same time, an association for the export of eggs. Towards 1890 the tendency to form associations declined, but received another impetus during the course of the first ten years of the present century. The success of the movement, however, during the following 20 years did not correspond with the efforts made and, in 1929, the 250 associations existing in the country retained about 14 per cent. only of the total egg trade.

During the last four or five years, however, remarkable progress has been made, also in this branch of agricultural co-operation in Sweden. In accordance with the regulations drawn up by the General Agricultural Society of Sweden and under its direction, an important work of reform was undertaken in 1930

with the aid of State subsidies (1) and the support of other agricultural organisations the result of which was the establishment of a large number of new local associations for marketing eggs and regional organisations grouping these associations (egg centrals). A national organisation, the *Svenska Ägghandelsförbundet* (Swedish Egg Marketing Federation) was also formed grouping the local associations and centrals. The *Ägghandelsförbundet,* which at the time of foundation in September 1932, included 5 centrals representing 15,000 producers, at the beginning of 1935, had 17 affiliated centrals with a total memberhip of 30,000 producers. The quantity of eggs available to the Federation in 1394 amounted to about 5,000,000 kg.

The following regulations, taken from the model rules drawn up by the *Sveriges Allmänna Lantbrukssällskap* for the use of the organisations, may give an idea of the organisation and working methods of the local egg marketing associations.

The principal object of the *local associations* is to collect and pass on to the centrals the eggs and slaughtered poultry of their members. On joining an association the member makes a cash payment of 2 crowns. His obligations include delivery, at the time and place indicated by the Council of Management, of all eggs produced by him for the purpose of sale (with the exception of sittings of eggs) and to deliver only eggs that are fresh, clean, unbroken, not more than one week old and duly marked with the number assigned to him. He is also expected to collect the eggs several times per day. The eggs are paid for in cash on delivery. The member may resign at the earliest from the association two years after the date of joining. At the General Meeting, the supreme authority of the association which, *inter alia,* elects the council of management composed of three members, each member present has the right to one vote. After the costs of expenditure have been covered, a maximum of 0.5 öre per kg.

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(1) In addition to the subsidies granted for organisation, the Swedish Parliament decided, in 1934, that, in order to encourage egg production, imports and exports of eggs could not be permitted without special authorisation and, in respect of importation, that the payment of a licensing fee of 30 öre per kg. should be made compulsory. The restriction on importation came into force on 1 March 1934. Furthermore, the Parliament of 1934 decided, in order to encourage export and to raise the level of the prices obtained by the producers on the national market, to introduce, as from 1 June 1934, supplementary payments on eggs exported. These will be drawn from the proceeds of the licence tax above mentioned and from a part of the proceeds of the taxes on concentrated foods and on bran, as well as from the proceeds of the import duty on maize, oats and other fodder. The payment of the supplementary payments on eggs exported has been entrusted to the *Sveriges Äggintressenters Förening* which, during 1934, had paid an export premium of 20 to 30 öre per kg. on eggs exported by its members and one of 5 öre (since 7 December 1934 2 öre) less on eggs exported by non-members.

The *Sveriges Ägginiressenters Förening,* which must not be confounded with the national organisation of egg centrals mentioned above, was established in 1934. Its object is to promote the economic interests of the members by working for an improvement in egg marketing conditions, but it does not itself engage in marketing eggs. At the beginning of 1935 the number of affiliated members included several egg centrals and co-operative consumers' societies. The Government appoints two representatives to the council of management.

of eggs is deducted from the annual profits and placed in the reserve fund up to the amount of 10 per cent. of the turnover of the preceding year. The remainder of the profits are afterwards distributed among the members in proportion to the weight in eggs supplied by them during the course of the year.

In accordance with the model rules, the objects of the *egg centrals* are to market eggs and other poultry-keeping products of their members, to organise co-operation between the members, to institute packing and warehousing stations and establishments for fattening and slaughtering poultry, to effect uniform payment according to quality, to purchase the necessary poultry-keeping requisites for members, and to promote the interests of the members and the co-operative movement in general. Membership of the egg centrals is open to the egg-marketing co-operative associations and other egg marketing bodies; also, when considered advisable, to private persons who can supply at least 1,500 eggs per annum from their own production. The members take up a share of 20 crowns for each 2,000 kg. of eggs sold during the last working year, one fourth of the share being paid in cash on joining the association and the remainder being paid in yearly instalments of 5 crowns These instalments are either paid directly or the amount is deducted from the payments made for eggs supplied. Members are expected to deliver all their eggs for sale to the central, but a member may be authorised to sell on the local market under conditions fixed by the council of management. A member may resign from the egg central two years, at the earliest, from the date of joining. At the General Meeting, which elects the administrative council of the egg central, each member has the right to one vote for each share taken up, but the number of votes of any member cannot exceed one fifth of the votes represented at the Meeting. The administrative council elects the council of management of the central and assists the latter when questions of greater importance must be decided. Before making additional payments for the year, at least 0.5 öre per kg. of eggs supplied and at least 10 per cent of the remainder of the net profit will be placed in the reserve fund up to the amount of 10 per cent. of the turnover of the last working year. The General Meeting subsequently decides if further deposits should be made. If the surplus is sufficient, the General Meeting may decide to pay 5 per cent. interest on the initial capital. A futher surplus may be constituted in a fund or paid to members in proportion to business done by them during the course of the year.

The *Svenska Ägghandelsförbundet* (Swedish Egg Marketing Federation) is the central egg marketing organisation. Its object, in accordance with the model rules, is to market eggs and other poultry keeping products on behalf of the members, to improve the quality of the products and to carry out propaganda for rationalised egg production and an increase in the consumption of eggs. On the other hand, the Federation is not engaged in the choice and packing of eggs which are in the hands of the egg centrals. The co-operative egg marketing centrals may become members of the Federation, also other organisations, of a certain importance, for marketing eggs and poultry. Members take up a share of 100 crowns for each 10,000 kg. of eggs and poultry sold

during the previous working year. Payment is distributed over 5 years at the rate of 20 crowns per annum. A member may resign at earliest 5 years from the date of joining. The member is expected to deliver to the Federation all the eggs and poultry not sold on the local market assigned to him by the council of management of the Federation. The member cannot sell, without the consent of the said council, eggs and poultry to persons or organisations likely to sell them, either directly or though intermediaries, outside his own local market. In addition, the member cannot buy eggs from a person or organisation not affiliated to the Federation without previously obtaining the permission of the council of management and under conditions fixed by the conucil. The council of management has the right to examine the accounts and business correspondence of the members for the purpose of supervising the observance of the above obligations and others. Any member who has sold products contrary to the provisions contained in the model rules must pay compensation to the Federation up to 20 per cent. of the value of the merchandise sold. The Federation pays its members a flat rate for eggs, regardless of whether the eggs are sold on different markets and at different prices, taking into account, however, the situation of the various associations in relation to the more important markets. At the General Meeting each member has the right to one vote and an additional vote for each complete 10,000 kg. of eggs and poultry sold during the course of the last working year. The General Meeting elects the council of management, composed of 7 to 15 persons, which in its turn appoints an executive committee of at least 3 persons. Before paying a member for merchandise supplied, 0.25 öre is deducted for each kg. of eggs and poultry and placed in the reserve fund up to the amount of 100,000 crowns and a further 0.25 öre is deducted and placed in a regulation fund, also up the amount of 100,000 crowns. At least 10 per cent. of the annual profits are placed in the reserve fund, after deducting necessary mortgages, up to the sum of 100,000 crowns. If the profit is adequate, the General Meeting may decide to distribute 5 per cent. as interest on the initial capital and the remainder may constitute a fund or be distributed to members in proportion to the payments made for merchandise supplied during the course of the year.

Considerable progress was made during 1933 and 1934, which latter must be considered only as the second year of the Federation's activity as it did not start working until September 1932. The number of affiliated egg marketing centrals increased during the year 1934 from 8 to 16 and the quantity of eggs purchased and sold increased by about 34 per cent. in relation to the figures for 1933 and reached the amount of 4,800,000 kg. Exports of eggs by the Federation increased considerably, that is, by 82 per cent. compared with the preceding year and, in 1934, represented about 35 per cent. of the total export from Sweden, while in 1933 the figure was only 20 per cent. The greater part of the eggs which are not exported or sold by members of the Federation on the local markets, are sent to Stockholm and to Northern Sweden, where the supply is insufficient. A quality mark, "the crown mark," has been introduced by the Federation for particularly high quality eggs.

6. — Activity of the agricultural co-operative banks.

Mortgage credit requirements and credit for current cultivation needs are met in Sweden mainly by the savings and trading banks, as well as, since 1916, by the agricultural co-operative credit societies, or agricultural banks. The development of these bodies was however for a number of years very slow, largely owing to the over rigorous measures which regulated their activity, in accordance with the original text of the law of 1915. Hence it was, for example, that at the end of 1929 the number of agricultural banks was only 175, grouped in five Central Banks, with a total membership of between 12,000 and 13,000 members, and credits issued for a total of 14,000,000 crowns in round figures. It was only after 1930 that the movement acquired vital importance, when the *Riksdag* resolved to establish a joint central organisation, the *Svenska Jordbrukskreditkassan* (Agricultural Credit Bank of Sweden) for the Central Banks of the country. Subsequently other radical changes were effected in the course of the following year in respect of the rules in force up to that time. At the end of 1934 the number of local banks had risen to 699, the number of affiliated members to 59,000 and the total amount of credits granted to nearly 43,000,000 crowns.

The function of the *local agricultural co-operative banks or credit societies* is to procure loans for their members for productive purposes, *e. g.*, for the purchase of means of production, minor improvements of lands and of forest plantations, construction of small buildings, installations of water conduits and of drains, methods of manure conservation, etc.; further in their capacity as representing the Central Bank to which they are linked, to collect the savings of the farmers for deposit in the Central Bank. The area of activity of a local bank is usually limited to a single commune. The larger communes may however be subdivided between several such credit societies, and also several small communes may be grouped under one society. This limitation of the area of activity of these banks is due to the assumption that the farming capacity, etc., and the economic circumstances of each member may be well known to the other members. The minimum number of affiliated members is 15. Membership is open to all Swedish citizens, whether farmers or not, and also to limited companies registered in Sweden undertaking some form of agricultural activity. Any person owning an agricultural estate situated in the area of activity of the bank may subscribe at most to one share for each complete 500 crowns of the value of the estate as fixed as basis of shareholding. If the estate is let, the owner and the tenant may each subscribe at most one share for each complete 1,000 crowns of the value stated. As basis of shareholding, the agricultural value of the estate is reckoned according to the assessment in force for taxes unless some other value is fixed by a special estimate made by the Central bank. Estates on which horticulture, poultry-keeping, fish-breeding or other similar activity is practised as an independent industry are equally regarded as farms, or agricultural undertakings. As the shareholding value in these cases the assessable value in force is reckoned. Members not owning or cultivating

land, and not exercising any of the independent activities of the kind above indicated, may subscribe one share only.

The payment due from members amounts to 5 crowns for each share subscribed. Of this total outlay two crowns at least must be paid in cash for each share, and the remainder during three years from the date of subscription. If the member obtains a loan from the Society the whole of the amount due will be paid at one time, or must be deduced from the sum lent. Of the total thus subscribed 3.50 crowns per share must be considered as initial capital of the agricultural bank, 50 öre per share will be utilised as contribution of the bank to the central bank to be placed in its guarantee fund, and one crown per share will be transferred to the reserve fund of the agricultural bank. On resigning membership a member receives only 3.50 crowns, or 70 per cent., for each share subscribed and fully paid up.

Members are liable for engagements made by the agricultural bank up to a sum of 50 crowns per share, and they are expected to submit to the charge, as may be fixed by the general meeting of the association for meeting any losses not covered by the existing reserve fund, such charge however not to exceed 10 crowns for each share calculated yearly.

As regards the constitution of the fund, it should be stated here that formerly the process was a very slow one, but that in accordance with the reforms recently adopted it will now be much more rapid. After deduction from the annual profit of the sums required to cover any deficits, at least 75 per cent. will now have to be placed to the reserve fund and only after that fund amounts to at least 20 per cent. of the maximum total of members' borrowings, will it be possible to make a transfer of less than 75 per cent.

The local banks obtain their working capital, apart from the amounts subscribed by members, by means of borrowing from the Central Bank, and they cannot, without authorisation from the Council of the latter, obtain loans in another credit institution. Since 1930 the local banks do not have their own deposit service, but may act as intermediary for deposits at the Central Bank. Local banks grant loans to those only of their members who own, or work a farm estate, or who practise horticulture, poultry-keeping or other analogous activity, as an independent industry. The maximum fixed for loans is 200 crowns per share paid up, but any persons owning an estate can obtain credits against mortgage of 60 per cent. of the agricultural value of the property, in accordance with the land tax in force. The bank may either make loans in the form of advances on mortgage security, personal security or pledge of cereals stored in warehouses or with the producer; or may act as intermediary for borrowing transactions by bill of exchange or by granting credits on current account, open to the competent central bank by the intermediary of the bank in the name of the member. The making of loans on the security of bills of exchange is effected by discounting bills issued or endorsed by the member in question, at the central banks. In the course of recent years, there has been a relatively large expansion of loans on pledge of cereals and these have been much used by members.

The agricultural bank receives from the State both organisation grants of 100 crowns at most and administrative subsidies of 4 crowns per year and per

member in the course of the first years after the formation of the bank, of two crowns per year and per member in the course of the subsequent period of five years, and of one crown and 50 öre in the course of the subsequent two five year periods.

For the administration of the business of the bank each bank must have a Council of Management elected by the general meeting, consisting of from three to seven members. The Council will meet at least once monthly and on dates fixed in advance each year. As regards all questions of management and accountancy the agricultural bank is expected to follow the instructions of the competent Central Bank, affiliation with which is compulsory.

The *Central Banks*, which are Unions of the local banks and of certain other economic associations in one or more regions, numbered, as already stated, nine in all at the end of 1934. To these banks there were affiliated at the same date 699 local banks with 59,000 members, as well as 201 other economic associations with about 85,000 individual members. The most important functions of these banks are to grant credits to members, to administer and manage their incomes, to place on interest-bearing banking accounts sums belonging to them, or to members of associations or to the public, to take measures for the proper audit of the accounts and of the administration of the banks and affiliated associations, and generally to work for the development of the co-operative movement and of credit among the farmers in their area.

In order that an association other than an agricultural bank may become a member of a Central Bank, it is required that such association, in the opinion of the central bank, should exercise its activity in a manner satisfactory from the economic standpoint and that its object should be the development of agriculture or of one of its subsidiary branches or the valorisation of the profits obtained by agriculture and by its subsidiary branches.

A central bank may begin operations only when there are affiliated to it 10 local banks with an aggregate of 3,000 share holdings.

Every local affiliated bank must pay in cash to the central bank 50 öre for each share subscribed by its members; this contribution is assigned as a whole to the guarantee fund of the central bank and cannot be restored in the event of withdrawal. Membership of the central bank may be granted to any other association on the basis of a share holding in a reasonable relation to the capital of the association in question. Thirty per cent. of this share holding is assigned to the guarantee fund of the Central Bank and is not restored on withdrawal of the association. No dividend is paid on this contribution. As regards the undertakings of the Central Bank the local affiliated bank is liable for them to the extent of 50 crowns for each share subscribed to it by its members, and any other association is liable with 50 crowns for each share held by it in the Central Bank. Every member affiliated to the Central Bank may, in case of need, be called on to make a compulsory annual payment of 3 per cent. at most in view of his guarantee for the obligations of the Central Bank. This compulsory payment may be made only in the event of the guarantee fund of the Central Bank proving insufficient to cover the losses that have occurred.

After making a deduction to cover the possible deficit of the previous year, all the annual profit of the Central Bank will be passed to the guarantee fund. Only when this fund has reached 10 per cent. of the loans made by the bank and outstanding at the end of the last financial year, and the half of the profit due to the depositors at the same, the central bank will be in a position to decide on the utilisation of a part of the annual profit for other purposes.

The Central Bank can grant credits only to members. Credits may be given against promissory notes, and credits on current account, and the Bank can also discount bills of exchange. Credits to affiliated banks will not exceed the maximum sum of the loans which may be granted to each member of the bank. The Central Bank is however empowered to make loans exceeding this maximum against a mortgage guarantee constituted by a farm estate, which has served as security for the member in question in obtaining a loan from the local bank, provided that the capital value of the mortgage falls within 60 per cent. of the agricultural value of the property according to the valuation made by the Commission of Taxation. An estate is regarded as an agricultural estate, even if there is carried on alongside of the farming, as an independent avocation, horticulture, poultry-keeping, pisciculture or any other similar activity.

Economic associations other than the local banks may obtain credits from the Central Banks, such credits not exceeding 200 crowns for each share subscribed by the association. The whole loan made to these associations cannot exceed one tenth of the sum fixed as maximum for the loans to be granted to the members of the local banks affiliated to the Central Banks, unless an exception to this limit is allowed by the Government.

The Central Banks obtain the necessary funds for their loans, either by means of sums deposited by the public under various forms of banking accounts (savings deposits, deposit accounts, capital account and also, in respect of the affiliated associations and their members, on cheque account) or by rediscounting bills at the Bank of the State, or by borrowing from the Agricultural Credit Bank of Sweden. Except with the consent of this latter no central bank can obtain credit from any other banking institution. Up to the present only one third of the funds necessary to the Central Banks have been raised on the deposits of the public, while two-thirds have been obtained by borrowings.

At the end of 1934 the total sum deposited by the public at the Central Banks amounted to about 18,000,000 crowns, the sum lent to 43,500,000 and all the funds to about 600,000 crowns. Of the sum lent the primary loans amounted to 13,500,000 crowns, the other forms of credit granted to local banks to 28,700,000, and the credits to other economic associations to 1,300,000 crowns. For the loans granted by the Central Banks the following rates of interest were at the middle of 1935 made applicable: for primary loans 3 to 3 3/4 per cent., for loans against promissory notes 3 3/4 to 4 3/4 per cent.; for cereal bills 3 to 4 per cent., for new bills 3 1/4 to 5 per cent. and for renewed bills 3 1/4 to 5 per cent. In addition to these rates of interest there are sometimes certain commissions, part of which go to the local banks.

In accordance with the resolution of the Parliament in 1928, the State guarantees the loans obtained by the Central Banks up to a certain point, and

State bonds are deposited as guarantee with the State Bank up to a sum corresponding to 20 per cent. of the sums borrowed by each Central Bank. At the time these deposits were not to exceed 500,000 crowns for each central bank but following on the decision of the Parliament of 1934 the maximum has been raised to 750,000 crowns.

The State gives financial support to the Central Banks in the form of an administrative subsidy, payable at 200 crowns for the first five years, 100 crowns for the second five year period, 50 crowns for the third, and 25 crowns for the fourth, this subsidy being calculated per year and by local affiliated bank or economic association.

Every local affiliated bank and every other association has the right to send a representative to the general meetings. The representatives of the local banks have one vote; the representatives of the other associations have one tenth of a vote.

The Council of the Central Banks is constituted by from 6 to 14 members elected for two years by the general meeting, as well as one member elected by the Agricultural Credit Bank of Sweden. The Council elects the president, vice-president, managing director and an Executive Committee consisting of three members chosen from among the members of the Council. The election of the managing director must receive the confirmation of the Council of the Agricultural Credit Bank of Sweden.

Svenska Jordbrukskreditkassan (Agricultural Credit Bank of Sweden). - - As already stated, a principal joint organisation was established in 1930 for the co-operative agricultural banks, movement, *viz.*, the Agricultural Bank of Sweden. According to a Royal Decree of 3 July 1930 the function of this bank is to borrow sums of money and to lend them to the Central Banks which utilise them for their activity, this apart from sums which may fall into them from their own deposits; in addition the Bank is to contribute to the regularisation of the business in cheques and drafts, on sight or on order, to supervise the administration and activity alike of the central and of the local banks, and in addition to act as promoter of agricultural banks and in general to develop this movement.

In the same way as the central and local banks the Agricultural Credit Bank of Sweden receives financial support from the State in the form of an administrative subsidy, payable with 0,05 per cent. of the loans granted by the bank during the first five years of its working and decreasing subsequently prorata as in the case of the central and local banks. Special subsidies are payable by the State to the Agricultural Credit Bank of Sweden towards the expenses of auditing, of instruction and of organisation. For the financial year 1934-35 the allocation estimated amounted to 50,000 crowns and had been larger in previous years.

As capital for the working of the loans of the Agricultural Credit Bank of Sweden the State had placed at its disposal in 1930 state bonds to the value of 15,000,000 crowns at 4 ½ per cent., a sum since increased to 25,000,000 crowns. In addition State bonds for a sum of 5,000,000 crowns were in 1933 placed at the disposal of the Agricultural Bank in order to form a guarantee for the loans made to it by the State Bank, and for the same purpose another 10,000,000 crowns were granted in 1934. The cover for the engagements of the Agricultural Credit

Bank of Sweden is however formed in the first instance by the guarantee of the central banks, which is in direct relation with the total of their borrowings from the Agricultural Credit Bank, and is joint and several in respect of all the banks.

In order to concede loans to the central banks the Agricultural Credit Bank of Sweden had effected borrowings to the end of 1934 for the sum of 24,140,000 crowns, and in particular with the Administration of State Pensions, the Post Office Savings Bank and the State Bank. The average rate of interest on these borrowings was at the same time 3.57 per cent., and the average rate of interest for the loans made by the Agricultural Credit Bank of Sweden to the central banks amounted at the same date to 3.71 per cent.

It is not practicable for the Agricultural Credit Bank to charge a less rate of interest for the loans made by it for the reason that it is obliged to pay for part of the sums borrowed a relatively high rate, 4 ½ per cent., for a period of 10 years. In so far as it may be able to secure capital at the more reduced rates now in force, the bank will clearly be able to reduce still further the rate of interest for the loans it makes.

As regards the employment of the profit arising from the working of the Bank it should be noted that in accordance with the rules such profit must be passed to the reserve fund.

Since 1933 all the auditing of the agricultural banks, central as well as local, has been centralised in a special section established for the purpose at the *Svenska Jordbrukskreditkassan;* this section also has advisory functions and supervises the working of the banks. The propaganda carried out by the Agricultural Credit Bank usually takes the form of lectures given at different places, the distribution of literature, publication of articles and notices in the periodicals which circulate among farmers. The Bank has also undertaken the training of collaborators in the work of organisation, and in particular the organising of courses of instruction for the officials of the agricultural banks.

The *Svenska Jordbrukskreditkassan* is administered by a Council consisting of five members one of whom is appointed by the Government and acts as president. A second is selected by the Administration of the Public Debt and the other three by the central banks.

7. — Other co-operative organisations.

Co-operation in Fruit-growing and other Forms of Horticulture. — The co-operative organisations for encouraging growing of fruit and of other horticultural products—an important branch of agriculture in Sweden, shown by the fact that the value of the apple harvest alone is estimated at about 70,000,000 crowns—have been in existence for some time in Sweden and, in 1934, there were already more than 800 associations of fruit-growers with more than 40,000 members. The local associations of producers are either organised as provincial associations of an educational type for promoting fruit growing by means of courses and lectures, arranging for the trees to be examined by experts, etc., or in so-called Fruit Centrals which are of more recent date and are engaged in collecting, selecting, packing and marketing the produce of their

members. At the head of the activity for improving the quality of fruits and developing fruit growing in general in Sweden is the *Sveriges Pomologiska Förening* (Swedish Association of Pomology), founded in 1910, while the *Riksförbundet Svensk Frukt* (National Federation of Swedish Fruit Growers), founded in 1934, which is the central organisation of the Fruit Centrals, is mainly a commercial undertaking. Its object is to secure the sale of that part of the fruits and other horticultural products of their members which they have not succeeded in marketing locally, and to purchase, on behalf of the members, the requisites necessary for production. There is a very close collaboration between the fruit centrals, and the educational provincial associations, and between the Swedish Association of Pomology and the National Federation of Swedish Fruit Growers, and a representative of the former Association is included in both the council of management and the executive committee of the National Federation.

When the organisation for marketing is completed there should be a total of 18 fruit centrals. In the most important centres of production, packing stations have been established where the products are collected, selected, packed and distributed, operations which are carried out according to rules which are uniform for the whole country. Of the 40 packing stations considered necessary, 30 to 35 will be functioning by the beginning of the season 1935.

Grain Warehousing Associations. — As has already been said, the central associations for co-operative purchase of farm requisites are also actively engaged in warehousing, drying, and marketing the grain of their members and granting credits on it. This activity, however, is not confined to these central associations, but is also carried out by other co-operative agricultural organisations specially established for this purpose, namely, the *Lagerhusföreningar* (warehousing associations) of which there are at present in existence 12 large and several of minor importance with a storage capacity of of about 60,000 tons (1). In so far as these associations fulfil certain conditions relative to affiliation, responsabilities and obligations with regard to supply, etc., the State, in accordance with the legislation in force, grants them credits amortisable over a maximum period of 40 years for the purpose of constructing silos, such credits amounting to 60 to 85 per cent. of the building costs. Amortisation payments are not required over a period of 3 years. If the silos are completed within a fixed period 15 per cent. of the building costs may be considered as State contribution and therefore only 70 per cent. has to be repaid.

Co-operation between Forest Owners. — While up to the time of the world war the activity of the forestry associations was entirely confined to problems of production—re-afforestation, drainage, regeneration of forests, etc.—the

(1) In September 1935 all the grain warehousing associations formed a joint organisation, the *Svenska Spannmålsföreningarnas Samorganisation* (National Federation of Grain Warehousing Associations).

very serious crisis of 1931-1933 in the forestry industry, which contributes substantially towards the agricultural revenue in Sweden, brought the problem of marketing to the front and led to a total transformation of the educational associations of forest owners into economic associations, either directly or through subsidiary organisations, whereas their work of sylviculture, properly so called, was to a great extent taken over by the so-called forestry administrations (*Skogsvårdsstyrelser*), institutions etablished by Royal Ordinance in 1923, for the purpose of seeing that the provisions of the laws on the supervision of privately owned forests are strictly observed.

The principal object of the associations of forest owners, as they exist at present, is to market the forestry products of their members and to carry out propaganda for scientific production and a more extensive utilisation of forestry products. The subscriptions payable by members are generally fixed per hectare of woodland in production. A certain number of associations require only a single subscription of 100 crowns as the maximum, but many also require annual subscriptions of 1 to 25 crowns. Each member has usually the right to one vote, but in certain of the associations the more important members have the right to from 2 to 3 votes. The most recently established associations have all introduced the obligation to deliver certain products, but this obligation as a rule is only applied following a special decision by the general meeting of the Federation.

The sale of wood for paper pulp and the sale of wood for fuel are very important items in the programme of all the associations of forest owners in Sweden and, in addition, the sale of wood for sawing by the associations in the north and the sale of posts and beams by the associations in the central parts of the country and in the south.

In 1932, the associations of forest owners established a joint organisation, the *Skogsägareföreningarnas Riksförbund* (National Federation of Associations of Forest Owners) which up to the present has been an organisation of an advisory nature interested also in forestry policy. It seems probable, however, that in the future the Federation will also initiate an economic activity and will take part in the organisation of marketing products.

Other Associations. — In addition to the agricultural co-operative organisations mentioned above there also exist among Swedish farmers several thousand associations for electric supply, about 1,000 threshing associations and 300 to 400 associations for operating mills, saw-mills, land drainage, for collection of litter and peat, beet-root growers, seed production, etc.

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PUBLICATIONS RECEIVED BY THE LIBRARY

Books.

General.

SOCIEDAD NACIONAL AGRARIA. LIMA. Memoria de la Junta directiva 1932-33; 1933-34. Lima, Gil, 1935. 323 p.

Political.

CANADIAN POLITICAL SCIENCE ASSOCIATION. Papers and proceedings of the annual meeting of the Canadian political science association v. II.–IV. 1930-1932. [Kingston, Ontario. The Jackson Press, 1931-1932] 3 vols.

POTTER, P B. An introduction to the study of international organization. 4th ed. New York D. Appleton-Century c° [1935]. XVIII, 645 p. (The Century political science series).

Economics.

DE MARCHI, L. Fondamenti di geografia economica 4a ed riveduta e notevolmente ampliata. Padova, « Cedam », 1935. XII, 462 p.

HARRIS, H. L. The economic resources of Australia. 2nd ed. Sydney, Angus & Robertson, 1934. 125 p

Rural Economics.

PASQUIER B. L. La Maison de l'agriculture algérienne au service du pays. Alger, P. & C. Soubiron, [1934], 202 p.

Co-operation.

AMERICAN COOPERATION, 1935. A collection of papers comprising the 11th summer session of the American institute of cooperation at Cornell university, July 15-19 1935. Washington, D. C, 1935. 676 p.

REICHSVERBAND DER DEUTSCHEN LANDWIRTSCHAFTLICHEN GENOSSENSCHAFTEN RAIFFEISEN. e. V Jahrbuch. (5. Jahrgang 1933 und 1934). Berlin, 1935. 75 p.

Agrarian History.

ROBISON, D. Bob Taylor and the agrarian revolt in Tennessee. Chapel Hill, University of North Carolina press, 1935. VII, 238 p.

Industry.

IRISH INDUSTRIAL YEAR-BOOK 1935. Edited by P. L. MCEVOY. Dublin, « Irish industry », [1935]. 350 p.

Trade.

LANDRY, A. La politique commerciale de la France. Paris, Recueil Sirey, 1934. 86 p.

PORRI, V. La politique commerciale de l'Italie. Paris, Recueil Siiey 1934 107 p. (Publications de l'Institut universitaire de hautes études internationales, Genève. n. 10).

ROBINET DE CLERY, A. La politique douanière de l'Allemagne depuis l'avènement de Caprivi jusqu'à nos jours (1890-1925). Paris, M. Rivière 1935. XII, 403 p

ROEPKE, W German commercial policy London Longmans, Green &, 1934. VIII, 86 p. (Publications of the Graduate institute of international studies, Geneva, n 12).

Various

RIZZATTI, FERRUCCIO. Piccola enciclopedia italiana Paravia 2ª ed aggiornata e notevolmente accresciuta Torino, G B. Paravia, [1935]. 799 p

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PIG BREEDING AS A FACTOR IN THE EARNING CAPACITY OF AGRICULTURE IN CERTAIN EUROPEAN COUNTRIES FROM 1927-28 TO 1931-32.

(*Conclusion*).

In a series of articles which have appeared in this Review in the course of this year, the endeavour has been to discover the extent to which pig-breeding has influenced the earning capacity of farms or has been a factor in its variations.

It has been recognised that the crops and the industries of a farm are part of its structure, and that their close organic connection makes it impossible to separate, speaking from the economic standpoint, the results accruing from the different branches. To quote M. Ferté, Director of the Soissons Accountancy Office (France), *it is in the synthesis of all these separate accounts that the single figure is found that has an absolute and indisputable value: the one that relates the whole.* Everything hangs together on a farm: the earning capacity of one branch of farming influences that of another branch.

The net return contains the key-stone of the whole of this discussion. Since the net return is the function at once of the gross return and of the farm expenses, by following the variations of the net return through the years, through the regions of production and the farming systems, it has proved possible to discover the causes of these changes: *viz.*, the increase or decrease in the different returns constituting the total gross return, one of which is the gross return of pig breeding; the increase or decrease in the components of the farm expenses and in the farm expenses themselves. In order to render the comparison possible among the countries, regions and farming systems, a common measure was chosen. The net return obtained in Denmark in 1927-28, for the whole of the Danish farms, which are mainly engaged in pig breeding, was reduced to 100 and served as the basis of comparison. The difference, positive or negative, then appeared between the net return of 1927-28 in Denmark and the net returns for the subsequent years in the same country; and further the difference between the net return in 1927-28 in Denmark and the net return in the other countries in 1927-1928 and in subsequent years. When the net returns increased, the data were examined to see if it was the gross returns that had increased or the farm expenses which had diminished, or whether the farm expenses had diminished to a greater extent than the gross returns. When the net returns diminished, the question

was whether it was the farm expenses which had increased or the gross returns which had diminished, or whether the gross returns had diminished to a greater extent than the farm expenses. From the gross return and the farm expenses the enquiry passed on to their components.

The values used in our study of the financial results of farms have thus been the gross return, the farm expenses and the net return, which last, since it is obtained by deducting the actual expenditure from the gross return, is that part of the gross return which may be regarded as being the effective return from the capital invested the farming.

If these accountancy results are compared with those of Denmark, it becomes possible to assign the countries to three groups: I. a group containing Denmark and Overijssel (Netherlands), where 90 per cent. of the values produced are values derived from live stock farming; II. a group of countries where the proportion of live stock products in the gross return does not exceed 70 per cent.: Switzerland, Norway, Sweden, Finland; III. a group of countries where such proportion is from 40 to 50 per cent.: Germany, Austria, Poland, Lithuania, Latvia and Estonia.

The gross return from pig breeding amounted in 1927-30:

in Denmark	to 31.30 %	of the total	gross return
in Overijssel	to 23.24 %	»	»
in Switzerland	to 8.89 %	»	»
in Norway	to 11.46 %	»	»
in Sweden	to 6.49 %	»	»
in Finland	to 8.48 %	»	»
in Germany	to 9.34 %	»	»
in Austria	to 17.48 %	»	»
in Poland	to 15.30 %	»	»
in Lithuania	to 18.52 %	»	»
in Latvia	to 13.65 %	»	»
in Estonia	to 13.93 %	»	»

In Switzerland, Sweden, Finland and Germany this proportion is lowest; it is highest in Overijssel; the countries of Central and Eastern Europe hold a middle position.

In regard to farm expenses, it may be said that the main expenses in Denmark are the labour costs and the expenditure for purchases of concentrated feeds and that these are very high. They are lower in Overijssel.

In Switzerland the main farm expenses are the labour costs and the general expenses. Farm expenses are higher than in Denmark; taking Norway, Sweden, Finland, a steady decline may be noted in that order.

Labour costs and purchases of fertiliser are fairly high in Germany; this country holds a middle position between the countries producing at high cost and those producing cheaply. The labour costs are 100 gold francs per unit of area (1.64 ha.); they are less high in Austria, in Poland, in Lithuania, in Latvia and in Estonia, a country which produces cheaply, than in Finland.

Switzerland is the only country which has a net return higher than Denmark. From 1927-28 to 1929-30 inclusive, the variations in the net return in the countries under review are due to atmospheric conditions, to the harvests, to the protection which was extended by the Governments to one or another product. The effects of the crisis do not begin to be felt till 1930-31. Market prices of farm products then collapse and the export trade is paralysed. Farm expenses, although lower, fall only in a less proportion than the gross return.

In 1930-31, the percentage composition of the gross return changes. The percentage relating to pig breeding may be shown as follows:—

for Denmark	to 29.09 %	of the gross	return
» Overijssel	to 16.64 %	»	»
» Switzerland	to 10.73 %	»	»
» Norway	to 11.61 %	»	»
» Sweden	to 7.82 %	»	»
» Finland	to 8.65 %	»	»
» Germany	to 8.56 %	»	»
» Austria	to 19.50 %	»	»
» Poland	to 12.13 %	»	»
» Lithuania	to 17.09 %	»	»
» Latvia	to 12.99 %	»	»
» Estonia	to 13.41 %	»	»

The percentage of the gross return derived from pig breeding thus increased in Switzerlana, Norway and in Austria; in Denmark, Overijssel, Sweden, Germany, Poland, Lithuania and Latvia it has diminished. The reasons will appear later.

In Denmark, production increased, but prices fell lower than those of milk, so that the gross return of the dairy industry has gained ground. In the Netherlands, the export of pigs slackened. In Switzerland the frontier was closed to animals from abroad, prices declined for oxen and pigs. In Norway production of fresh and condensed milk became less. The production of beef and pork increased but pig prices declined. Switzerland increased pork exports; production increased but prices unfortunately fell considerably. In Finland the volume of exports of eggs, pork, butter and cheese increased. In this country the cost of labour fell but building materials became dearer. In Germany the production of pork increased, in spite of the fall in prices; production of beef and milk was contracted. Austria became an exporter of dairy products, and Lithuania of cereals. The production of pork in Austria was greatly increased, and in Lithuania much more milk was produced. Pigs did not sell readily in Poland; in Latvia pig production increased and also, markedly, dairy production. Except for dairy products, the external trade of Estonia began to disappear. Prices and production of beef, pork and milk decreased in nearly equal proportion.

TABLE I. — *Increase or Decrease of the Net Return, of the Gross Return and of the Farming Expenses from 1927-28 to 1931-32.*

Gold francs per unit of area.

COUNTRY	Net return: Index numbers	Net return: Difference	Gross return, difference: Pigs	Gross return, difference: Milk and dairy products	Gross return, difference: Breeding of slaughter and other stock	Gross return, difference: Cereals and root crops	Gross return, difference: Other branches	Gross return, difference: Total	Farming expenses, difference: Labour	Farming expenses, difference: Other expenses	Farming expenses, difference: Total
Denmark:											
1927-28	100	...	577	691	263	114	116	1,761	616	1,045	1,661
1928-29	343	+ 243	+ 133	+ 33	— 15	+ 11	+ 9	+ 171	— 24	— 48	— 72
1929-30	306	+ 206	+ 138	— 3	— 7	— 43	+ 9	+ 94	— 25	— 87	— 112
1930-31	31	— 69	— 82	— 103	— 40	— 62	— 3	— 290	— 46	— 175	— 221
1931-32	— 21	— 121	— 231	— 266	— 124	— 65	— 32	— 718	— 196	— 401	— 597
Overijssel:											
1927-28	27	— 73	— 253	— 78	+ 41	— 9	— 91	— 390	— 104	— 213	— 317
1929-30	291	+ 191	— 222	— 65	+ 161	+ 5	— 90	— 211	— 108	— 294	— 402
1930-31	97	— 3	— 380	— 173	+ 98	— 27	— 94	— 576	— 113	— 460	— 573
1931-32	— 252	— 352	— 436	— 288	— 178	— 48	— 116	— 1,066	— 166	— 548	— 714
Switzerland:											
1927-28	203	+ 103	— 386	— 12	+ 174	+ 28	+ 432	+ 236	+ 344	— 211	+ 133
1928-29	306	+ 206	— 416	+ 76	+ 181	+ 39	+ 420	+ 300	+ 307	— 213	+ 94
1929-30	418	+ 318	— 379	+ 52	+ 226	+ 32	+ 442	+ 373	+ 267	— 212	+ 55
1930-31	398	+ 298	— 358	— 16	+ 316	+ 14	+ 328	+ 284	+ 245	— 259	— 14
1931-32	205	+ 105	— 417	— 49	+ 203	+ 25	+ 398	+ 160	+ 221	— 166	+ 55
Germany:											
1927-28	— 2	— 102	—	—	—	—	—	— 946	— 235	— 609	— 844
1928-29	59	— 41	— 493	— 540	— 152	+ 286	+ 104	— 795	— 203	— 551	— 754
1929-30	47	— 53	— 492	— 559	— 156	+ 282	+ 72	— 853	— 217	— 583	— 800
1930-31	27	— 73	— 515	— 567	— 16[illegible]	+ 238	+ 61	— 948	— 236	— 639	— 875
1931-32	7	— 93	— 528	— 588	— 194	+ 191	+ 46	— 1,073	— 285	— 695	— 980
Austria:											
1927-28	127	+ 27	— 467	— 560	— 139	— 21	+ 47	— 1,140	— 302	— 865	— 1,167
1928-29	79	— 21	— 494	— 570	— 174	— 31	+ 29	— 1,240	— 347	— 872	— 1,219
1929-30	70	— 30	— 478	— 571	— 154	— [illegible]	+ 20	— 1,228	— 342	— 856	— 1,198
1930-31	41	— 59	— 474	— 568	— 149	— [illegible]	+ 12	— 1,234	— 340	— 835	— 1,175
1931-32	— 11	— 111	— 489	— 587	— [illegible]	— 51	— [illegible]	— 1,327	— 372	— 844	— 1,216

Norway:											
1927-28	148	+ 48	— 422	— 126	+ 67	+ 128	+ 151	— 202	+ 71	— 321	— 250
1928-29	174	+ 74	— 390	— 125	+ 12	+ 112	+ 176	— 215	+ 27	— 316	— 289
1929-30	178	+ 78	— 400	— 154	+ 30	+ 55	+ 133	— 336	— 27	— 387	— 414
1930-31	106	+ 6	— 423	— 163	+ 28	+ 24	+ 105	— 429	— 47	— 388	— 435
1931-32	38	— 62	— 461	— 250	— 67	+ 28	+ 30	— 720	— 157	— 501	— 658
Sweden:											
1927-28	38	— 62	— 534	— 330	— 103	+ 117	— 35	— 885	— 209	— 614	— 823
1928-29	71	— 29	— 529	— 321	— 102	+ 157	— 41	— 836	— 212	— 595	— 807
1929-30	51	— 49	— 496	— 328	— 116	+ 97	— 41	— 884	— 227	— 608	— 835
1930-31	29	— 71	— 514	— 365	— 126	+ 106	— 49	— 948	— 233	— 644	— 877
1931-32	18	— 118	— 535	— 426	— 152	+ 57	— 58	— 1,114	— 299	— 697	— 996
Finland:											
1927-28	79	— 21	— 533	— 432	— 190	— 7	— 58	— 1,220	— 364	— 835	— 1,199
1928-29	61	— 39	— 533	— 415	— 188	— 21	— 56	— 1,213	— 350	— 824	— 1,174
1929-30	53	— 47	— 532	— 446	— 194	— 37	— 60	— 1,269	— 373	— 849	— 1,222
1930-31	55	— 45	— 540	— 484	— 205	— 33	— 65	— 1,327	— 401	— 881	— 1,282
1931-32	49	— 51	— 551	— 547	— 223	— 47	— 81	— 1,449	— 471	— 927	— 1,398
Poland:											
1927-28	192	+ 92	— 496	— 593	— 149	+ 70	— 34	— 1,202	— 411	— 883	— 1,294
1928-29	142	+ 42	— 500	— 582	— 158	+ 62	— 26	— 1,204	— 399	— 847	— 1,246
1929-30	99	— 1	— 492	— 590	— 164	+ 13	— 53	— 1,286	— 420	— 865	— 1,285
1930-31	26	— 74	— 534	— 611	— 194	+ 0	— 63	— 1,402	— 435	— 893	— 1,328
1931-32	10	— 90	— 544	— 630	— 217	— 24	— 66	— 1,481	— 462	— 929	— 1,391
Lithuania:											
1928-29	28	— 72	— 539	— 648	— 239	— 22	— 51	— 1,499	— 480	— 947	— 1,427
1929-30	53	— 47	— 528	— 636	— 234	— 34	— 64	— 1,496	— 489	— 960	— 1,449
1930-31	35	— 65	— 533	— 629	— 244	— 42	— 56	— 1,504	— 491	— 948	— 1,439
1931-32	1	— 101	— 536	— 649	— 248	— 70	— 50	— 1,553	— 481	— 971	— 1,452
Latvia:											
1927-28	30	— 70	— 539	— 600	— 236	— 61	— 70	— 1,506	— 467	— 969	— 1,436
1928-29	— 15	— 115	— 545	— 616	— 220	— 72	— 67	— 1,520	— 473	— 932	— 1,405
1929-30	40	— 60	— 542	— 604	— 221	— 70	— 47	— 1,484	— 478	— 946	— 1,424
1930-31	31	— 69	— 540	— 593	— 230	— 47	— 62	— 1,472	— 472	— 931	— 1,403
1931-32	— 32	— 132	— 555	— 625	— 243	— 73	— 76	— 1,572	— 486	— 954	— 1,440
Estonia:											
1927-28	32	— 68	— 541	— 618	— 224	— 65	— 37	— 1,485	— 461	— 956	— 1,417
1928-29	21	— 79	— 540	— 612	— 225	— 64	— 49	— 1,490	— 461	— 950	— 1,411
1929-30	18	— 82	— 537	— 610	— 228	— 70	— 19	— 1,494	— 462	— 950	— 1,412
1930-31	12	— 88	— 547	— 621	— 233	— 73	— 57	— 1,534	— 482	— 964	— 1,446
1931-32	— 12	— 112	— 558	— 637	— 238	— 72	— 66	— 1,571	— 498	— 961	— 1,459

(1) In the first column of the Table are found the index numbers of the net returns of all the countries under review, and for the years 1927-28, 1928-29, 1929-30, 1930-31 and 1931-32. The net return of the Danish farms in 1927 28 has been taken as equal to 100 the other net returns are calculated on this base figure. The following columns show the difference, positive or negative, between the net returns, the gross returns and the farm expenses in Denmark in 1927 28 and those in the subsequent years. All the figures thus relate to the conventional unit of area adopted here, the area of 1 04 ha, corresponding to the net return of 100 gold francs in Denmark in 1927-28.

TABLE II. — *Production per hectare from 1927-28 to 1931-32.*

Country	Production per hectare (1)			Gross return in quantities (2)				
	Cereals (quintals)	Potatoes (quintals)	Sugar beet (quintals)	Cattle (kg. of live weight)	Milk (kg.)	Pigs (kg. of live weight)	Cereals (quintals)	Potatoes (quintals)
Denmark:								
1927-28	9.10	1.92	4 —	107	1,557	131	1.51	0.81
1928-29	11.79	3.98	4.36	108	1,579	152	2 —	0.89
1929-30	11.79	3.64	3.09	80	1,609	142	1.28	0.61
1930-31	10.43	3.14	3.43	70	1,848	149	1.01	0.72
1931-32	8.98	2.83	2.54	47	1,778	128	1.01	0.85
Overijssel:								
1927-28	4.98	11.98	7.99	128	1,920	144	2.64	—
1929-30	6.78	20.19	8.95	166	2,120	231	5.04	—
1930-31	5.19	15.14	9.25	154	2,179	118	6.19	—
1931-32	4.78	13.59	4.45	10	2,304	118	2.91	—
Switzerland:								
1927-28	1.13	3.25	0.21	146	1,727	52	1.36	2.38
1928-29	1.10	2.97	0.22	139	1,734	53	1.51	2.51
1929-30	1.07	3.62	0.20	152	1,745	60	1.50	2.19
1930-31	0.93	2.62	0.19	170	1,718	59	1.32	2.05
1931-32	0.98	3.33	0.18	135	1,704	56	1.56	2.83
Germany:								
1927-28	—	—	—	—	—	—	—	—
1928-29	8.57	14 —	3.75	33	436	38	6.87	5.61
1929-30	9.41	13.64	3.77	38	382	27	7.56	5.35
1930-31	7.58	16 —	5.06	35	343	28	7.04	3.50
1931-32	7.52	14.94	3.77	34	351	28	6.21	3.22
Austria:								
1927-28	2.56	4.22	1.06	35	295	46	1.80	0.48
1928-29	2.51	3.48	0.63	29	273	38	1.52	0.86
1929-30	2.47	4.07	1 —	26	281	36	1.25	0.62
1930-31	2.33	3.71	1.37	28	288	43	1.59	0.66
1931-32	1.97	3.69	1.33	14	264	51	1.30	0.60
Norway:								
1927-28	3.37	6.41	—	90	1,380	76	2.28	3.67
1928-29	3.53	9.99	—	82	1,382	78	2.80	3.46
1929-30	3.24	9.06	—	88	1,425	82	2.65	4.78
1930-31	3.31	7.67	—	90	1,400	105	2.41	3.73
1931-32	2.64	7.63	—	93	1,582	104	2.07	4.42
Sweden:								
1927-28	5.82	2.01	2.12	65	957	20	4.23	0.68
1928-29	6.51	3.63	2.33	72	904	19	5.81	0.78
1929-30	6.38	3.75	1.53	60	924	31	5.67	1.51
1930-31	6.51	3.50	2.40	63	685	38	4.84	2.50
1931-32	5.30	2.94	1.74	77	647	38	4.63	1.43
Finland:								
1927-28	3.55	3.53	0.16	19	719	26	1.79	1.10
1928-29	3.18	2.05	0.14	20	765	24	1.56	1.21
1929-30	3.18	2.27	0.09	19	747	24	1.60	1.22
1930-31	4.46	2.92	0.10	15	744	27	1.94	2.18
1931-32	3.83	2.78	0.11	15	730	31	2.01	1.82
Poland:								
1927-28	4.67	10.22	1.38	15	352	41	3.42	3.45
1928-29	5.12	10.65	1.88	15	351	41	3.66	3.51
1929-30	5.79	12.33	1.93	14	337	38	3.76	2.43
1930-31	5.46	11.78	1.78	11	325	35	4.13	3.66
1931-32	5.03	11.64	1.04	16	310	38	3.21	3.56

Country	Production per hectare (1)			Gross return in quantities (2)				
	Cereals (quintals)	Potatoes (quintals)	Sugar beet (quintals)	Cattle (kg. of live weight)	Milk (kg.)	Pigs (kg. of live weight)	Cereals (quintals)	Potatoes (quintals)
Lithuania:								
1927-28	3.15	3.03	—	—	—	—	—	—
1928-29	3.02	2.30	—	—	—	—	—	—
1929-30	4.12	4.44	—	11	160	27	3.30	1.92
1930-31	4.41	4.52	—	6	200	26	5.62	3.20
1931-32	4.03	5.17	—	4	151	34	2.78	2.01
Latvia:								
1927-28	1.88	1.67	—	12	397	22	—	—
1928-29	1.58	0.80	—	14	306	18	0.69	—
1929-30	2.32	2.68	—	11	329	15	0.71	—
1930-31	2.69	2.35	—	8	399	18	1.88	—
1931-32	2.02	2.32	—	5	288	18	1.07	—
Estonia:								
1927-28	1.55	2.40	—	14	212	18	0.80	1.18
1928-29	1.40	1.62	—	13	218	16	0.71	0.85
1929-30	1.70	2.44	—	11	197	16	0.70	1.00
1930-31	2.09	2.80	—	10	194	14	1.11	0.85
1931-32	1.88	2.77	—	7	272	12	1.06	0.86

(1) Figures taken from the *International Year-Book of Agricultural Statistics* and referred to the area serving as base for the transformation calculations of the accountancy results, this area not being the same in all countries, as certain offices include the forests, water, etc., while others exclude them. Consequently the figures are not strictly comparable as between one country and another.

(2) Figures based on the accountancy data and also referring for each country to an area calculated according to the custom of the offices, as explained under (1). In the three first columns appear the quantities harvested per hectare of the area in question, and in the five columns following the quantities which goto make up the gross return, that is, those which were sold or consumed in the household; those which were transformed on the farm are excluded. Whence the greater or less difference.

JOSEPH DESLARZES.

THE NEW REGULATION OF THE WHEAT MARKET IN SPAIN

The agricultural wealth of Spain is estimated at 10,000 millions of pesetas per annum; half of this amount, approximately, being accounted for by cereals, in which wheat alone represents 50 per cent., since the average production of 40,000,000 quintals of wheat is equivalent to 2,500,000,000 pesetas.

It is clear from these figures that wheat is the basic factor in the agricultural wealth of Spain, thus justifying the particular attention given by the State to everything relating to this essential foodstuff. As there has been in recent years a considerable body of legislation in regard to wheat, some brief account of the present position of the wheat problem in Spain would seem to be called for.

The new direction given by the State to the wheat market, which has recently been dislocated by excessive imports in 1932 and by two very abundant harvests with consequent carry over of stocks, marks a profound change in the methods previously followed, *viz.*, from a definite policy of intervention to one of trading on the open market. Up to the present, in fact, an interventionist policy prevailed, introduced twenty years earlier, involving the fixing of standard prices, which sometimes represented the highest price that the grower could ask for his wheat,

(maximum price), and at other times the lowest price which the miller was expected to pay for wheat. These standard prices as stated above fix the maximum and minimum price limits for Spanish wheats on the market, and within these two extremes there is a continuous advance for the months of the farming year in proportion to their distance from the time of harvest. Immediately after the harvest, the minimum price of 50 pesetas rules for earlier months up to November, when the rate rises to 51 pesetas and closes at the maximum price of 53 pesetas during the months of April and May which immediately precede the new harvest, the period when the wheat stocks are at their lowest.

The establishment of these prices moreover had the effect of protecting the interests of the grower and of the miller whenever these interests were threatened by abnormal conditions. In years of crop failure and accordingly of scarcity, and before recourse is had to importation, the maximum rate above which the grower cannot sell his wheat acts as a protection of the interests of the miller, preventing the grower from taking advantage of the scarcity to sell at high prices; in years of good harvests the minimum price fixed for the millers' purchases protects the interests of the grower who apart from these measures assuring him a remunerative price might have been faced with a serious fall in the price of wheat. There was no question of any export of surplus supplies in such years of plenty, since the prices at which Spanish wheats can be placed on the world consuming markets are too high to make export possible. Spain cannot in fact export wheat, firstly because, apart from the exceptional years of short or of surplus harvests, there is a close relation between production and internal consumption, and secondly — and this the factor which is really prohibitive of export — Spanish wheat is grown at a very much higher cost price than are the wheats which have invaded the world market, such as the Canadian, the Argentine wheats, etc. On the other hand Spanish wheat cannot compete with these latter in quality. The ruling price of Canadian Manitoba I is 70 cents per bushel, which corresponds to 20 pesetas per quintal; this price when compared with the 50 pesetas which is the minimum price of Spanish wheat makes it useless to consider exportation.

The object of this policy of standard prices is the maintenance of a low price for bread making it always accessible to the masses. Within the limits of this policy and in order to maintain its equilibrium, a number of subsidiary measures ensured the steady working of the market; it will thus be seen that a tolerance is allowed in the percentages of other flours for admixture with wheat flour in times of wheat shortage, that the temporary importation of foreign wheat is permitted and that tariffs are lowered or even removed. It may be said that farmers and those engaged in subsidiary industries never for a moment experience any withdrawal of State protection.

Such was the development of the situation up to the time when the surplus production of 1932, the excessive imports of the following year due to the poor harvest of the 1933 season, together with the stocks remaining from 1932 and the again abundant harvest of 1934, brought about a congestion on the market and new legislative measures had to be adopted in order to ensure regulation. Before however, giving an account of these measures which culminated in the abandonment of the policy of intervention, it may conduce to a clearer view of the situation

if some figures are presented relating to the production of wheat and to the areas under wheat cultivation in Spain in the five year period 1930 to 1934 (1):

Production of Wheat (1930 to 1934) *in Quintals*

1930	39,925,575
1931	36,585,330
1932	50,133,551
1933	37,621,872
1934	50,848,833

Area under Wheat Cultivation (1930 to 1934) *in Hectares*

1930	4,505,660
1931	4.550,653
1932	4,552,135
1933	4,519,753
1934	4,608,331

Hence while the areas under cultivation have scarcely varied from one year to another, the production shows very perceptible fluctuations, the difference between the crop production in 1931 or in 1933 and that in 1932 and 1934, being approximately 14,000,000. Since the quantities required for consumption and for sowings represent some 42,000,000 quintals yearly, the surplus production of these last mentioned years could not but have effects on the normal equilibrium of the market, causing dislocation.

In view of these difficulties the Government accentuated its policy of intervention by means of a Decree promulgated on 1 July 1934, by which free trading in wheat between growers and millers was prohibited and all operations of purchase and sale of wheat were placed exclusively in the hands of the Wheat Trading Committees (*Juntas de contratación de trigo*) set up by the Decree in question (2). This direct intervention was absolutely necessary in order to do away with the abuses practiced alike by the two parties concerned, growers and purchasers. It has already been seen that in the years of an abundant crop, when by the establishment of a legal minimum a remunerative price was assured to the grower for the whole year, the grower encountered difficulties in selling because in view of the abundance of the crop the miller would reduce his purchases in the certainty that under the compulsion of necessity the grower, and more particularly the poorer cultivator, would be ready to offer him the wheat at a price below the rate fixed. In other years of short production, while no importation such as would render the market normal was as yet allowed, the owner would place an exaggerated value on the product and would refuse to sell, holding the wheat in the certainty that the miller would endeavour to obtain it by offer-

(1) The data are taken from the *International Yearbook of Agricultural Statistics* published by the International Institute of Agriculture.

(2) See the *Monthly Bulletin of Agricultural Economics and Sociology*. October 1934, pp. 472-477.

ing prices above the legal rate. From the opposing interests of the two parties there arose a chronic state of disorder on the market which it was the object of the Government to bring to an end, by setting up the Committees mentioned above which were to undertake all operations of sale and purchase, on a sworn declaration of stocks made by the growers and warehousers of the grain, thus ensuring that no part of the product should escape the action of the State fiscal measures.

In spite of the strictness with which the decree was applied the holding back of wheat continued together with clandestine purchases at prices lower than those established by the scale of prices; on the other hand it must be recognised that as a result of the decree any very marked fall in the actual prices of wheat was avoided. Circumstances have rendered necessary the further improvement of the existing mechanism and of its working, and with this object a new supplementary decree was promulgated on 24 November 1934, by which there were set up new Committees known as regional committees (*Juntas Comarcales*) the function of which also was to intervene in all wheat purchase operations and to declare null and void the purchase and sale of this cereal if taking place apart from the intervention of the regional committee, and to impose on any buyer carrying out an operation outside the control of the new organisation a fine of not less than 10 per cent. nor above 50 per cent. of the value of the cereal forming the object of the operation carried out or proposed. These newly instituted bodies consist of a president appointed by the Government and of two members one of whom represents the growers and the other the millers, together with a secretary. By the decree of 24 November 1934, the number of these committees is as far reduced as possible, and with this reduction in view it is enacted that they are to be set up only in the localities of more importance either on account of the extent of their wheat market, or from the existence of wheat flour mills, or because they offer from their position special facilities for the transport of the wheat to the natural points of consumption.

The functions assigned to these organisations by the decree involve the total taking over by the State of the whole trading cycle of the wheat; from the reception and registration of the sworn declarations of stocks made by the growers to the sale and delivery to the millers of all the consignments dealt with under the regulations. In consequence it will be the duty of the committees to issue the permits or way bills which prove that the owner of the wheat has fulfilled all legal obligations; to control the price operations so that they may be effected in conformity with the rate indicated; to ascertain if the wheat sold corresponds in quality with the declaration made by the seller; to settle the disputes which may arise between the buyer and the seller; in short, to see that no part of the process escapes the strict intervention which ensures the proper working of the market.

By this decree there was instituted, as a basic and directive factor, in each province of the Spanish territory, a higher organisation presided over by the engineer in chief of the Provincial Agronomic Section and with a membership including two representatives of wheat growers, two millers and one representative of the Government acting as secretary. It was the function of this provincial

organisation to set up the regional committees already referred to, to assign them their sphere of action, to see that their working is in conformity with all the measures regulating the wheat market and in particular with the price regulations, to appoint delegates with the duty of intervening in the price operations connected with the purchase and sale of wheat, and of communicating to the central Government the position and course of the wheat market in their respective province.

As indicated by the Government in the preamble of the decree as above outlined, the measure is of a temporary character only, pending the conclusion of the enquiries made for the purpose of ascertaining whether at the time of the next harvest there would be fully established the network of silos throughout the peninsula.

Such network, it is anticipated, will of itself, and also by means of the standardisation introduced of commercial classes and types, regulate the wheat market and thus resolve this problem in a permanent way. The Minister of Agriculture proposed to submit to the *Cortes* very shortly a bill granting the necessary powers for immobilising, without moving from the spot, large quantities of wheat, for releasing these if convenient, or for denaturing the grain and directing it towards a form of consumption other than the present. By these measures supplemented by the proposal just described which was under consideration at the moment of the preparation of the decree of 24 April 1934, it was designed to bring the market into a normal position.

Finally on 27 February 1935, the law granting the powers (*Ley de Autorizaciones*) referred to in the preceding paragraph was passed. In spite of the measures taken so far, the problem of wheat remained serious from the continuance of the aggravating causes. The very large harvest of 1934, exceeding by more than 6,000,000 quintals the internal consumption needs, gave rise to a surplus which together with the carry over from previous harvests congested the market resulting in a price decline. It thus became necessary to withdraw from circulation a large quantity of wheat, and this was in fact the object of the law as now passed. It was a question once more of regulating the market in view of the fact that the measures taken previously, the establishment of prices and the intervention of the committees, had proved to be in themselves insufficient.

In virtue of this law, the Minister of Agriculture is empowered to adopt two forms of procedure: the first is the voluntary holding back of a quantity up to 600,000 tons of wheat in the hands of agricultural associations or of individuals. The other is the purchase of these 600,000 tons, which in this way are definitely withdrawn from the market; for this purpose is utilised private capital which is offered to the State and accepted by it.

In the case of immobilisation, the owner of the wheat would receive, on the day on which the holding up agreement was concluded, a sum not exceeding 9 per cent. of the value of his wheat at the price rate then ruling. This percentage would represent interest on the capital, warehouse storage and insurance as against the undertaking made not to place the wheat on sale before the date stipulated.

The second method, or the definitive purchase, would be carried out by an institution established for that purpose expressly; such institution would draw from the operation, in addition to the normal interest, a limited business profit on the capital employed. The law affords in fact a maximum of protection to such an institution which is formed in order to prevent, in the words of the law itself, " the subordination of the human to the economic interest, always the ruling one in large plutocratic enterprises, " so long as these are not brought under the strict control of the general interest, as represented by the State.

An examination may now be made of the method of meeting the expenses of the immobilisation, which include the payment of the premium for the holding up of the wheat and the general management costs. The expenses of the definitive purchase, on the other hand, include payment of interest on capital employed and the normal profit of the institution carrying out the purchase, as also the usual management costs.

The funds for these purposes are supplied by the State and are obtained by means of a charge of one peseta per quintal of wheat, which in virtue of its powers the State imposes on all operations of buying and selling wheat. They are also derived from the receipts represented by the difference between the purchase and sale price of another operation effected directly by the State which in that same year bought a consignment of 105,000 tons of foreign maize. The State in addition renounced the customs dues on this consignment of maize, and earmarked the same amount to the insurance of its operation of holding up or direct purchase of wheat.

It is thus the State itself — a fact of great importance as giving an idea of the protection it affords to the farming interests – that undertakes the responsibility for all expenses and which ensures the ultimate destination of the grain to the grower who agrees to immobilise it, or to the undertaking which becomes the purchaser.

The result of the out and out purchase of 600,000 tons of wheat is evident: once the more needy farmers have consigned their wheat, the others who are holders will be assured of sale before the end of the season.

The first power granted by the law, that of immobilisation, does not require any large financial resources and hence does not involve the risks of management by powerful groups of financiers, although it does entail an official bureaucratic management wider than that required by an official enterprise undertaking such purchases. The second authorisation requires a much larger amount of capital, since it has to meet the expenditure involved in the purchase price of the quantity of wheat.

It has already been stated that this law gave authority — and for that reason bears the title of *Ley de Autorizaciones* — to the Minister of Agriculture to immobilise a quantity of wheat or to buy it outright: the Minister however desired to share this responsibility with the Legislative Chamber and, without concealing his preference for the authority granted him for effecting the definite purchase of the grain and for making use of private capital for financing the operation, he left the choice to the Chamber between the three courses: immobilisation, purchase outright, or the simultaneous use of both methods. The Chamber

pronounced in favour of the first, *viz.*, immobilisation of the surplus wheat, adding that if the object in view was not so obtained, then direct purchase with recourse to private capital should be adopted.

The Minister proceeded immediately to immobilisation, maintaining the price at the ruling rate, as it was essential to guarantee the selling price of the wheat held back.

The intention was to resolve the problem for the season in course and for the following seasons. Actually, if the seasons proved to be normal, the situation would resolve itself. In view, however, of the possible contingency of a fresh surplus due to an especially plentiful harvest, although the recourse to immobilisation always remained open, the law nevertheless made provision for other means in preference, authorising the Minister also to impose a temporary embargo on new clearings of lands intended to increase the areas under wheat, while the reduction of existing wheat areas was also under consideration.

The facts, however, cheated the hopes and the good intentions of the framers of the law. When the immobilisation was decreed, only 25,000 tons of wheat were offered, a figure falling far below the 600,000 tons that had been anticipated. The measure had been in fact enacted too late for the small farmers who had for the most part already disposed of their wheat, at low prices, in clandestine sales in the hope of avoiding the effect of the price rates and of escaping the action of the assessment boards (*Juntas fiscalizadoras*), their first object being to raise ready money to meet their pressing needs. The larger growers and the speculative holders of wheat were waiting for a better opportunity of selling their stocks.

In consequence it became necessary to have recourse to the alternative power, that of direct purchase, and with this object, there was published in March 1935 a form of tender whereby the financial circles in Spain were made aware of conditions of tender for the purchasing contract. One month later, in April, after having examined the proposals and suggestions sent in, the Government published the rules of the tendering which may be summarised as follows:

All financial institutions of national character might tender provided that they engaged themselves as follows:

(1) to purchase outright and keep in store, withdrawing it from the market, a quantity of wheat up to 500,000 metric tons grown on the territory of the Peninsula, and forming part of the harvest of 1934;

(2) to hold available capital of their own for employment in such purchase amounting to not less than 45,000,000 pesetas. This capital must be national;

(3) to indicate the rate of annual interest which the lending institution will have to charge for the capital employed in the purchase of the wheat, such interest not to exceed that calculated by the Bank of Spain for its current discounting operations;

(4) to indicate also the amount which the financing institution will claim to take at the expiry of the contract as trading profit;

(5) to undertake to begin the purchases of wheat within a fortnight after the contract has been conceded by the State, and further to undertake to pur-

chase the half of the 500,000 tons before 1 July and the remainder before 1 August, so that the market may be cleared before the arrival of the new crop;

(6) to state in detail the method in which the concessionary undertaking proposes to proceed in the business of the purchase as assigned to it, indicating all the circumstances which may influence the due performance of the operations and the factors reckoned on for their full accomplishment.

At the same time it is enacted in the form of tender that the institution obtaining the concession shall sell the wheat purchased without giving preference to any one consignment, that it shall make the purchases gradually and in the chronological order of reception, and that all the insurance operations effected by the contracting body are to be carried out with national insurance companies. Consignments of wheat purchased will be paid for in accordance with the rates in force for the cereal.

In order to allow a profit to the institution obtaining the contract of purchase, such institution is empowered to purchase abroad and to import without payment of customs duties 100,000 tons of foreign maize.

Finally the body obtaining the contract will be subject to inspection by a Committee appointed by the Minister of Agriculture which will control all the activities of the body. This Committee will include a qualified agronomist attached to the Ministry of Agriculture, a State lawyer and an officer of the State Accountancy Section.

On the expiry of the period fixed by the Government measure for the concession of the contract, on two occasions no concession could be made, because there were no tenders. The sum to be advanced for the purchasing operation was certainly large, but it was not on account of the high figure which represented the purchase of the 500,000 tons of wheat that the national financial undertakings abstained from competing. There was in fact another powerful factor which influenced the holding back of private capital, namely, the serious risk attending the operation. The harvest was nearly due, and the forecasts were for a specially abundant crop; a further large surplus of wheat on the market could not fail to affect prices. It has already been noted that by the terms of the contract as announced the institution making the successful tender would have to purchase the wheat at the price fixed by the scale at the time of making the purchase. If after the grain was bought and warehoused, there was to be a large surplus from the new crop after all requirements were met, the price would necessarily have fallen and such fall would entail a loss for the purchaser who had bought at the higher price. Moreover, the risk was still further increased by the incidence of other factors, for example, the possible deterioration of the grain purchased, either in its quality, or keeping powers, during the period of holding back, since the purchasing institutions if not equipped with premises suitable for storage of this kind, might have had to warehouse the grain in places not offering a full guarantee for the safe keeping of such large quantities of grain. It was mainly on this account that no tenders were received.

All these government measures as above described, whether achieving success or not attaining the desired object, clearly reflect the desire of the Government to tackle and to resolve a problem which so directly affects the farming inter-

ests. Keeping this objective in view and in the determination to avoid at all costs the collapse of prices which might occur at the time of the coming harvest, which, as already stated, was forecasted as exceptionally abundant, the Government took immediate steps to meet the situation, and on 9 June 1935 a law was enacted authorising the Minister of Agriculture to purchase either directly or by delegating his powers to a State Bank, with the resources of the Public Treasury, the surplus wheat which threatened to dislocate the market.

In accordance with the terms of this law, the Minister of Agriculture obtained from the Chamber the authorisation to mobilise the necessary funds and instructed the *Banco Exterior de España* to make the purchase. This institution, however, was not prepared to agree to do so, and the Minister, in the last resort, with the consent of the Chamber decided to split up the operation and to have it carried out separately by provinces. He asked for tenders from the leading agricultural associations and others offering large guarantees, and these were to carry out the purchasing operation in their territory under the inspection of the heads of the bureaux of the provincial agricultural department. This time the object was attained.

The total sum of 209,000,000 pesetas which was set apart by the Minister for this operation was obtained as follows: 30,000,000 from the Treasury, 75,000,000 from a credit granted by the Bank of Spain with the State endorsement, and 84,000,000 from the Agricultural Credit Service. Out of these funds partial payments might be made to the provincial agricultural associations whose tenders were accepted, such payments to be used for the purchase of the wheat that might be offered, with the proviso that the grain must be in good and sound condition, free from impurities or with a maximum tolerance of 3 per cent.; the purchase would be made at the price fixed for each consignment by the head of the Agronomic Section in question.

This last measure has been effective. This time the quantity of wheat to be withdrawn from the market was 400,000 tons, and of this it proved possible to purchase 372,978 tons for which 185,012,444 pesetas were paid; that is to say, the farmer received on an average 50.38 pesetas per quintal, a price which may be considered as remunerative. The difference between the quantity bought and the 400,000 tons contemplated, *viz.*, 27,022 tons of wheat, forms the guarantee of loans incurred and not paid off by the National Agricultural Credit.

It was observed at the beginning of this article that the State was proposing to find another method of solving the wheat problem which so readily becomes acute in a country such as Spain, which has a small regular shortage of wheat but where there may occur such serious irregularities of production that in some years the supplies reaching the market may exceed the home consumption and depress the price movements. It is a question of passing from a strictly interventionist policy to trading on the open market and to a free circulation of wheat throughout the whole country.

Mention has already been made of the forms taken by this interventionist policy and an account has been given of the legislative measures relating to max-

ima and minima prices, the establishment of provincial and regional committees and also the committees for purchase and sale of wheat, and finally of the *Ley de Autorizaciones* the object of which was to withdraw from the market the surplus stocks which brought about the lowering of prices.

The measures which open the way to free trading may now be examined. In the preamble of the Decree of 21 September of the present year, which sets up the provincial committee regulating the wheat market a body replacing the regional and provincial committees which disappear, the text reads: " the Government reiterates its principle as opposed to the policy of interventions on the wheat market which is continued only under pressure of circumstances, and it awaits the approval of the law already presented to the *Cortes* and designed to bring about the establishment of purely agricultural organisation which will give a proper direction to and finally resolve the problem. "

The organisation referred to by the preamble is no other than the Wheat Consortium, *i. e.*, an institution which, in accordance with the bill now put forward, will act on all the national markets buying wheat and selling it at fair prices which will vary in the course of the year according to the season. In the scheme for formation of this Consortium special attention has been given to the establishment of the prices, since actual experience has shown that the system of standard prices uniform for the whole country, such as was in force, far from contributing to the solution of the problem merely complicates it. The rate must correspond with a fair price, and as such is considered one that covers all costs of production while leaving also a legitimate profit to the grower. This conception of the fair price embodied in the bill differs alike from the conception held by the grower and from that of the buyer, since for the former the fair price is the highest possible and for the latter it is the lowest possible. Moreover the price as established by the Consortium will not be the same in all the regions, for in Spain there are lands on which the cost of production of 100 kg. of wheat does not exceed 35 pesetas while on others outlay of at least 50 pesetas is entailed. The variation in the price of wheat according to the season is fully justified; when the commodity is one the production of which is not continuous but intermittent, as is the case of wheat, the seasonal variation of price is a consequence of the pressure of supplies at the time of harvest and it is natural that the first seller receives a price lower than sellers who hold back; otherwise all would wish to sell without delay since, apart from avoiding all warehousing risks, they would benefit by the interest on capital. The seasonal variation in the price of wheat represents economic factors as obvious as the interest on capital and the insurance premium covering all risks, including the risk of an anticipated price fall due to the forecast of an exceptionally fine crop. All these factors must be taken into account in price fixing.

The latest measure taken by the Government for the definitive solution of the wheat problem in an atmosphere of commercial freedom is of quite recent date, *viz.*, 14 November of the present year. A decree issued on that date establishes the office of Commissioner General for wheat, an indispensable office, since the constant changes of the Government on the one hand, on the other the immense range of action required of the Minister of Agriculture, made it

impossible to devote the continuous attention necessary to a question of such importance to the Nation as that of wheat. The Commissioner General is already appointed and the Government is delegating to him all the powers which the relevant legislation in force confers upon the Minister of Agriculture.

The duty assigned to the Commissioner by the decree is the examination of the scheme for the Wheat Consortium which is to organise definitely the wheat market, in the conditions of trading in a free market, and while waiting for the approval of the Chamber for the bill to establish a provisional regime, simple and less interventionist than that in force, while at the same time sufficiently strong to encourage elasticity on the market, which at present is greatly hampered by the numerous laws that have been successively enacted in recent years.

E. MARTINEZ DE BUJANDA.

HAIL INSURANCE IN SPAIN

In 1934 the following private companies were operating hail insurance in Spain.

MUTUAL INSURANCE SOCIETIES.

"Caja de seguros mutuos contra el pedrisco," founded in 1917 at Madrid by the Spanish Farmers' Association.

"Mutua española de seguros agropecuarios," founded at Madrid by the National Catholic Agrarian Confederation.

"Mutua de seguros agrícolas," founded at Madrid by the co-operative action of owners of farms in Spain.

SPANISH AND FOREIGN LIMITED COMPANIES.

"Covadonga," a limited insurance company of Madrid, Alarcón, founded in 1924 with a share capital of 5,000,000 pesetas and a paid up capital of 1,250,000 pesetas.

"La Compagnie d'assurances générales," Paris.

"L'abeille-grêle," Paris (1).

Private insurance companies in Spain come under the Commercial Code and under special laws relating to the supervision of insurance companies, for example the law of 14 May 1908 and the regulations of February 1912 (2).

The law of 1908 has had precedents in Spain in regard to State supervision of insurances. By article 32 of the Finance Law of 5 August 1893 the insurance companies or societies were bound periodically to submit the balance sheet of their operations and to deposit values representing their mathematical reserves. A

(1) *El progreso agrícola y pecuario.* Madrid, 22 September 1935, p. 560.

(2) Angel DE TORREJÓN Y BONETA. Economía y valoración agrícola, forestal y urbana. Madrid, p. 33.

further step in the direction of inspection was made by article 43 of the Finance Law of 30 June 1895 as completed by a measure of 21 January 1896.

It was, however, the law of 14 May 1908 which actually laid the foundations of a methodical and permanent inspection and supervision. This law contains four chapters and some temporary provisions.

Chapter I entitled *General Provisions* is the most important. By Article 1 there are brought under the provisions of the law all undertakings the object of which is to effect insurances on human life by means of companies with fixed premiums, mutual societies or share-out clubs, on moveable or real property and in general on any risk. Such undertakings may exist for any purpose, may have any form or any designation, they must be registered at the Ministry of Agriculture. For the purposes of the application of the Law, there are considered as national enterprises those which have their headquarters in Spain, and are not either affiliated to or branches of foreign companies. By the terms of article 3 there are excepted from the provisions of the law, the Monts-de-piété, mutual aid societies, local thrift associations, whether municipal or provincial (1), as well as institutions undertaking insurance on land or sea transport, formed in accordance with the Commercial Code. Article 10 reaffirms that institutions insuring against accidents in work are subject to a special regime (2)

Among other necessary formalities required by Article 2, for obtaining registration, the societies or companies must, as a preliminary, deposit, in values as fixed by the law, a security which amounts to: for national or foreign life insurance companies, 200,000 pesetas, if foreign on condition that they belong to a country granting legislative reciprocity, otherwise the security for foreign companies is 500,000 pesetas. For other insurance institutions the security may amount to from 5,000 to 100,000 pesetas.

By article 4 and the following articles, the conditions under which registration may be refused are laid down, and also the possible methods of appeal against the refusal of registration.

Chapter II is devoted to guarantees. These consist in the first place in certain injunctions in regard to publicity, and secondly, and especially, in the investment of the funds of the companies — in values determined by the law — in the deposit of these funds in the general Bank of deposits, and in the compulsory constitution of mathematical reserves. Foreign companies operating in Spain are required to constitute mathematical reserves, not only for the insurances arranged and transferred abroad by them or by their branches or affiliated bodies in Spain, but also for the insurances arranged by them on Spanish soil (art. 20). They are further required to keep special books, drawn up in Spanish, for all operations effected by them in Spain; their policies and contracts must be prepared in Spanish. These provisions of article 22 of the law repeat those of article 12 of the French law of 17 March 1905.

(1) The same exceptions are to be found in Article 1 of the French law of 17 March 1905.

(2) Law of 30 January 1900 (*Annuaire de legislation étrangère*, 1901, p. 284).

Chapter III establishes an advisory Committee in insurances and a body of insurance inspectors with the duty of supervising and inspecting the companies. Chapter IV states the penalties in respect of any violations that may occur of the provisions. The law concludes as already stated, with some temporary provisions (1).

The public authorities have been actively engaged with agricultural insurance during recent years (2). In 1919 the State, by decree of 9 September, established the National Organisation of Agricultural Insurances (*Mutualidad Nacional del Seguro Agropecuario*), one of the most immediate objects of which was hail insurance. The field of activity of this organisation rapidly developed, and on 26 September 1929, it was transformed by decree into the Commission of Agricultural Insurances with widened scope. The directive impulse given to national insurance by this organisation, alike in its earlier and in its subsequent form, proved a stimulus to private insurance. Later, however, insurance under direct State management was abolished, and the Commission was transformed into a Section of Agricultural Insurances with a more limited field of action, dealing only with reinsurance of farm risks, especially of hail damage, this latter being now the branch best known. In accordance with the terms of the decrees of 23 April and 18 June 1930, insurance companies, the risks of which had been reinsured by the Section, had the right to compensation for hail damage, and also to valuation costs.

In 1934 a very important decree dated 11 January greatly widened the range of State activity in the sphere of agricultural insurance.

The following is an account of the main lines of the organisation of this form of State intervention.

Under this enactment a clear distinction was established between insurable and non-insurable farm risks. To the former class belong, as well as hail insurance, also forest fire and farm fire insurance, and insurance against live stock mortality and against incapacitation of stock.

As non-insurable risks, on the other hand, are considered risks from drought, frost, floods, persistent rains at critical periods, hurricanes, and finally risks due to plant diseases and pests.

Protection against hail risks as also against all other insurable risks is carried out by the State by means of reinsurance contracts, with or without compensation for losses, by subsidiary insurance contracts, or by establishing a direct State insurance service, either voluntary or compulsory.

The reinsurance, or subsidiary insurance, contracts are arranged for a period of one year, and may be extended year by year for a further period of two years without any modification in terms. A decree of 19 January 1934 prescribes that application must be made for these insurance contracts and their extensions

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(1) P. Sumien in the *Annuaire de législation etrangère* published by the Societe de legislation comparée. Paris, 1909, p. 353.

(2) *Boletin del Instituto de Reforma Agraria.* December 1933, p. 265.

before 31 October, and that the terms should be finally agreed before the end of the following month of November.

Provided that it undertakes agricultural insurance and fulfils the conditions to be stated below, any society or company may enter into reinsurance or subsidiary insurance contracts with the State. The societies are required: (*a*) to have obtained due authorisation from the insurance and thrift inspectorate to operate in Spain; (*b*) to fix their regular premium rates and supplements in such a way as to cover the expenses of insurance and reinsurance, taking into consideration the scale of exemptions as accepted, or calculated by the State; (*c*) to recognise the right of the State to satisfy itself as to the accuracy of all the particulars which refer to the work of these societies or companies, as also its right of inspection and intervention in the assessment of damage or losses; (*d*) to submit, in the event of disagreement as regards the assessments, to the judgment of an umpire or of three official experts, one of whom shall be appointed by the State; (*e*) to have recourse, in the event of any doubt as to the interpretation of the contract, to an arbitration tribunal, consisting of the head of the Service of insurance and thrift attached to the department of Thrift and Social Policy, of a member of the Council of the Service appointed by the said Council from among the representatives of the insurance organisations, and an official appointed by the Director-General for Agrarian Reform. Such recourse may be had without prejudice to the right to make further appeal to the ordinary courts.

Mutual insurance societies are required not only to conform to the above conditions but must also bring evidence that: (*a*) they constitute a single society and that they operate over the whole of Spain whatever may be the branch of insurance they undertake; (*b*) that they are forming federations of mutual insurance societies within the limited radius of activity whatever may be such radius and whatever the branches of insurance so operated, and that, linked together in such organisations, they operate over the whole of the national territory; (*c*) that in the case of their operating hail insurance, their membership consists of at least 500 full members, and that, in the case of their operating insurance for more than two kinds of crops, their total assured capital amounts to at least 5,000,000 pesetas. The required figures as regards membership and total of assured capital have to be doubled in the event of the societies in question covering risks on one or two kinds of crops only.

These conditions may be modified by ministerial ordinances, when circumstances require it, and after the necessary information has been communicated to the proper quarter.

Mutual insurance societies which conform to the rules set out, and which do not offer a choice of risks, nor, in general, place a limit to the acceptance of risks, may make application to enter into a reinsurance contract with the State and may choose between two forms of reinsurance: a reinsurance without compensation for losses on the basis of a share which shall not exceed 90 per cent. of all risks and of a maximum commission of 30 per cent. on the premiums; and a reinsurance with compensation for losses on the basis of a share not to exceed 75 per cent. of all risks, and a commission on the premiums which must not exceed 25 per cent.

Societies are to retain on their own account at least 25 per cent. of each risk.

When the reinsurance by the State takes the form of a contract with compensation for losses and reinsurance of 75 per cent. of the losses, such compensation may amount to 100 per cent. of the losses insured by the mutual insurance societies, including the costs of valuation. When on the other hand less than 75 per cent. of the risks are reinsured by the State — whether the insurance society has or has not reinsured the remainder with another society — the liability of the State must not exceed that corresponding proportionally to the percentage established by the contract.

The percentage of liability for the compensation of losses is to be stipulated in the contracts and in certain cases for which provision is made in the law it may be limited by the State if circumstances make this advisable.

Limited companies and mutual insurance societies which operate or offer choice of risks or which limit their acceptance of risks, may enter into reinsurance contracts on the basis of a maximum share of 50 per cent. of all risks, no compensation of risks however being stipulated. On its side, the State may reinsure excess of risks with societies legally authorised to effect hail insurance in Spain. For this purpose there may be considered as excess any portion exceeding 5 per cent. of the total of the original risks. The State cannot grant nor insure risks in reinsurance on an optional basis. As regards subsidiary insurances, the mutual insurance societies which conform to the rules established by the law indicated above, and which do not operate a choice of risks nor in general place a limit to their acceptance of risks, may make application to the State to enter into a contract of subsidiary insurance by which a maximum of 10 per cent. of the liquid premiums of the previous season may be fixed but no commission included. Such societies are to retain on their own account 25 per cent. at least of the total of each of the risks insured by them. Limited insurance companies and mutual insurance societies which operate a choice of risks or which limit acceptance of risks may not enter into subsidiary insurance contracts with the State. As regards direct insurances the law has established that the State may effect insurances of this type only: (*a*) in the case where there is an insurable risk not covered by private insurance. When a direct insurance on the side of the State exists and private insurance decides to operate, the direct insurance by the State comes to an end and is replaced by the private insurance on condition that this latter insurance is effected in accordance with the guarantee conditions required for the insured persons; (*b*) when the private undertaking effects insurance with an evident bias in favour of the insured persons; if however the causes of this bias disappear, then the direct insurance by the State comes to an end; (*c*) in the case in which on account of the special character of the farm property, the State is directly concerned in its preservation, protection and development and for this purpose it assigns fixed grants. In such a case, the direct insurance is to be undertaken by the service of protection against the insurable risks, or by any other service considered to be the most appropriate for the purpose contemplated, it being understood that a special authorisation is required, and that, if the

service of protection has not the direct management, it should have the preference as reinsurer or subsidiary insurer.

In order to guarantee its action of protection the State reserves to itself the right to carry out an inspection through its experts and at any moment of the social and economic activities of the societies with which contracts have been made, as well as to intervene when it is considered advisable in the event of losses or of the valuations arising out of the reinsured losses even if there are no relations existing between these societies and itself.

In no case may rates for agricultural risks be established by these societies on any technical basis which would result in net premiums less in value than those calculated or approved by the State.

In view of fulfilling the obligations contracted in consequence of its protective function of insurable farm risks the State is to include in the budget the sums required for covering any deficits due to the excess of the total of losses and costs over the premiums received or to the total of the compensation of losses in the case of reinsurance. Such entries on the budget may be accumulated in such a way that in favourable years the surpluses may be paid into a general reserve fund which will make it possible to pay in years of disaster, the whole or a large proportion of the losses without involving the State in fresh sacrifices.

When the total of the general reserve reaches at least 2 per cent. of the capital reinsured, directly insured or the object of subsidiary insurance by the State in the course of the previous year, the entry in the budget may be omitted or reduced until the reserve in question falls to a level lower than 2 per cent. In the years when the total of premiums paid in exceeds the compensation sums and the costs, the surpluses so arising must be accumulated with the payments made by the State with the view of increasing the general reserve.

Mutual insurance societies which conform with the provisions of the law and which do not operate a choice of risks nor limit risks, and which have surpluses of premiums over compensation payments, are obliged, in the same way as the National Service of Agricultural Insurances, to form or to add to a general reserve intended to cover the deficits which may occur in the course of disastrous years, and that even if this obligation does not spring directly out of contracts.

The State undertook, starting from the date of the entering into force of this law, not to grant any extraordinary credit intended for purposes of relief of persons who have suffered losses in consequence of insurable calamities affecting agricultural or forestry enterprises, provided that the sums, entered on the State budget for the purpose of protecting agriculture against agricultural and forestry risks, amount at least to one per cent. of the capital reinsured or directly insured or subject to subsidiary insurance during the previous year. The undertaking made not to grant extraordinary credits holds also in the case when the credits established by the State in view of covering the surpluses of losses and costs over premiums, cease or are inferior to one per cent. of the total of capital reinsured or insured in either of the ways indicated.

The agricultural insurance department, which has assumed the name of the National Service of Agricultural Insurances (*Servicio Nacional de seguros del*

campo) has the function of applying the protection established by the law, and acts under the Ministry of Agriculture. It is attached to the Institute of Agrarian Reform in the capacity of this latter body of representative and manager of the public administration. The National Service of Agricultural Insurances undertakes the conclusion of contracts ot reinsurance and of subsidiary insurance under the prescribed forms and conditions, provided that the economic conditions and the organisation of the societies who apply for this form of State aid so permit.

This Service established costs, constitutes and adds to reserves, invests the funds at its disposal in State values, administers the reserves so constituted, and if necessary, also the residue still remaining of the foundation capital of the former *Mutualidad Nacional del Seguro Agropecuaria* which capital was placed by Decree Royal of 13 June 1930 at the disposal of the Service of Agricultural Insurances.

The expenses of this Service are covered by the following receipts: (*a*) a supplement on the premiums, capital sums or policy costs, such supplement to be fixed each year. in the contracts but never to exceed 5 per cent. of the premiums; (*b*) the interest from the investment of the reserves; (*c*) the commissions collected for risks assigned in reinsurance; (*d*) subsidies that may be granted by the provincial Chambers, the communes and other institutions of public character; (*e*) donations and bequests made by private persons; (*f*) any other receipt not here contemplated.

The surpluses from the recovery of costs, which may be obtained in the course of each working year, are assigned to form a special reserve known as an auxiliary reserve, which is used to subsidise at their inauguration mutual aid funds or banks for non-insurable risks when such are legally constituted. This reserve may also be used to reconstitute the working capital of the former National Insurance organisation for agricultural insurance.

The law enacted further that so long as the Service of Agricultural Insurances cannot cover expenses from its own resources, the Institute of Agrarian Reform will be expected to enter on its budget, as was the practice up to the date of the publication of the law of 1934, the sums required for the upkeep of this Service.

Protection against non-insurable risks is afforded by the State either in the form of direct grants in aid made in the case of damage by hurricanes or floods, or through the stimulus given by it to the formation of mutual aid banks.

The assistance in the form of grants is intended exclusively for the encouragement of public works of agricultural interest, which may come to the help of affected areas, and for this reason these grants can never be used for the compensation of individuals.

The Council of Management undertaking the administration of these relief measures and constituted for the purpose in close connection with the Ministry of Agriculture has the duty of determining the quality and quantity of the work which has to be carried out in each case.

The total sum employed in this way must not, according to the law, exceed 25 per cent. of the losses as ascertained by the technical staff: the distribution is to be determined by the Council of Management.

No advances may be made on any pretext whatever in respect of grants in aid which are to be assigned. Moreover the sums approved for any disaster will be granted on a provisional basis only until, at the end of the year, it becomes possible to determine the precise amount available for each case.

The grants in aid made by the State are debited to a special fund of the budget. This fund may accumulate the surpluses obtained in the more favourable seasons, forming a supplementary reserve which is to be employed in the course of years in which disasters occur. If a special heading has not been established in the budget, an extraordinary credit must be granted for the same purpose. In other cases of non-insurable risks, other than hurricanes and flood, the State has undertaken in accordance with the law of 1934, to encourage the formation of mutual aid banks maintained by the farmers themselves: such banks must be authorised to function by the competent bodies.

These banks may receive subsidies from the National Service of Agricultural Insurances whenever there are in existence funds in the auxiliary reserve.

Banks or funds of this character and receiving technical or financial assistance from the State may be inspected at any time with a view to supervising or facilitating the normal course of their working. Banks formed apart from State aid can only be inspected if one-third of their members so require.

As regards premium rates, the latest classification of agricultural products for insurance against hail is as follows.

First Class.

Roots, tubers and bulbs: rape, turnips, carrots, radishes, parsnips, sugar-beet and fodder-beet, potatoes, Jerusalem artichokes, sweet potatoes, edible sedges, yams, garlic, onions, leeks, shallots, etc – *Natural and sown grasses, etc :* Lucern, clover, sainfoin, Spanish sainfoin, ray-grass, fenugreek, brome grass, meadow grass, etc. – *Aromatic plants* (with the exception of tobacco and anise): tea, hops, cumin, etc. – *Oleaginous plants:* peanut, castor oil plant, colza, poppy, sunflowers, sesamum, etc. – *Mulberry leaves:* for silk-worm food.

Second Class.

Winter cereals (with the exception of oats and barley): wheat, rye, spelt, meslin, etc. – *Maize and panicum.*

Third Class.

Summer cereals (with the exception of maize and panicum): rice guinea corn, buckwheat, millet, canary-grass, etc. – *Oats and barley. Anise. Colouring plants:* saffron, bastard saffron, woad, madder, etc. *Farinaceous vegetables:* haricots, tares, chick-peas, carobs, lentils, blue vetch, lupins, beans, vetches, peas, dolichos, soya, etc. – *Fodder plants for seed.*

Fourth Class.

Textile plants (with the exception of hemp): linen, cotton, China-grass, esparto grass, aloe, etc. - *Nurseries of bedded out plants.* – *Varieties of fruit trees with dry fruit:* almonds, filberts, chestnuts, walnuts, etc.

Fifth Class.

Spring fruits: apricots, strawberries, cherries, figs, medlars, etc. – *Osiers. Beetroot for seeds. Tobacco of current qualities for cut tobaccos.*

Sixth Class.

Hemp. Nurseries for grafted fruit-trees. Market-gardens: melons, water-melons, gherkins, capsicum, tomatoes, egg-plant, cucumbers, etc. – *Tobacco:* good quality, for cutting. - *All plants grown in kitchen-gardens and intended for direct consumption.*

Seventh class.

Summer and autumn fruits (with the exception of apples and plums): pears, peaches, quinces, figs, pomegranates, etc. – *Wine grapes. Olives for the production of oil.*

Eighth Class.

Apples and plums. Table grapes. Olives for direct consumption. Oranges and lemons.

Special Class.

Tobacco, fine quality, for cigars. – *Ornamental and garden plants and their flowers. Teasels or wool-carders.*

In regard to the quota for this class, a consulcation should be held before the insurance is accepted.

The tariffs of the premiums vary considerably, not only in the different provinces, but also in the jurisdictions of each province and even in each commune of the jurisdictions.

The following table shows the minimum, average and maximum premiums of each class for the insurance of capital of 100 pesetas:

Premiums	Classes							
	I	II	III	IV	V	VI	VII	VIII
Minimum	0.60	0.80	1.10	1.40	1.80	2.15	2.50	2.85
Average	2.20	2.40	3.20	4.00	4.80	5.65	6.50	7.25
Maximum	3.30	4.40	5.00	6.00	7.00	8.00	9.00	10.00

A compulsory supplement of 15 % must be added to all the above-mentioned premiums.

In accordance with a decree issued by the Minister of Finance (*Gaceta* of 28 June 1934) there has been established under the auspices of the Central Commission for experiments in tobacco growing, a system of insurance against hail which includes all the tobacco crops in Spain. Re-insurance is guaranteed and will be effected principally through the National Agricultural Insurance Service. The Regulation appeared in the *Gaceta* of 6 July 1934

The following figures show the amounts insured and the compensations paid by insurance companies during the period 1930-34:—

Insurance Companies	Capital insured pesetas	Compensation paid pesetas
Covadonga	124,457,198.00	3,758,222.58
L'abeille-grêle	81,047,982.00	1,972,443.48
General Insurance Company	50,205,804.00	948,518.23

In the course of 1934 the benefit societies recorded the following data:—

Insurance Societies	Capital insured pesetas	Compensation paid pesetas
Caja de Seguros mutuos	49,770,322.99	940,541.40
Mutua Española de Seguros agropecuarios	18,832,217.79	724,120.00
Mutua de seguros agrícolas	13,141,019.50	(1) 149,233.02

The following table shows the figures recorded for the period 1930-34:—

Year	Capital insured pesetas	Compensation paid pesetas
1930	32,055,448.00	1,906,578.00
1931	30,915,260.00	599,686.00
1932	42,309,766.00	1,579,520.00
1933	42,637,864.00	(2) 2,392,275.00

F. ARCOLEO.

BIBLIOGRAPHY ON ECONOMIC AND SOCIAL QUESTIONS

PROCEEDINGS OF THE THIRD INTERNATIONAL CONFERENCE OF AGRICULTURAL ECONOMISTS, Bad Eilsen, Germany, 26 August-2 September 1934, p. 498. Oxford University Press, London, 1935.

The Proceedings of the third international conference of agricultural economists held at Bad Eilsen (26th August-2nd September 1934) deserve a detailed mention. The material which was presented by the economists who attended that meeting and the discussions that followed have lost nothing of their interest in the intervening months. The conference was attended by 170 delegates from all parts of the world. Its unofficial character did not impair its importance. if anything, it increased it, as a number of delegates who held high official positions in their respective countries, were thus free to express their views in their private capacity.

The programme of the Conference " was prepared with the purpose of emphasizing the significance of national policies and aspirations, their interaction in the modern world, and the international problems of economic relations which result, all with special reference to the sphere of agriculture (3). " It differed from the programmes of the

(1) *El Progreso agricola pecuario*, No. quoted, p. 560.

(2) DE TORREJÓN Y BONETA, *op. cit.*, p. 41.

(3) Proceedings of the International Conference of Agricultural Economists – Introduction.

two preceding conferences (1) in which "considerable attention has been given to the technical problems of agricultural economic research, but in view of the gravity of the world conditions in the period 1930-34, it was decided that the Third Conference should devote its whole time to a study of national and international policies and that the question of research method should be omitted." It was decided to divide the programme into four sections, of which the first dealt with the national policies of various countries "special emphasis being laid on the forms, stages and limits of economic planning."

The second section of the programme dealt with the social and economic organisation of farms, including the family and peasant farm and the large scale capitalist or corporation farm (2).

The third section dealt with some particularly interesting aspects "of the trend of natural forces governing supply and demand." The problems of international currency and international debts and those dealing with trade agreements between nations and attempts at international agreements for the control of production, or of marketing constituted the subject matter of the fourth section.

The purpose of the Bad Eilsen meeting was most authoritatively outlined in the address of Professor Max Sering whose efforts were responsible to a considerable extent both for its careful preparation and remarkable success.

Professor Sering, in his paper on "The World Economic Crisis" which constituted the introductory stage of the meeting, gave a clear account of the primary causes of the world crisis chiefly, among them, the economic disorder created by the position of Germany as a result of the peace treaties, the transformation of the U. S. A. from a debtor to a creditor nation and the "capitalists' anarchy, which at the time of improving trade, planlessly invested large capital sums where there was a prospect of monetary profit, and produced a chaotic overproduction of many commodities. In the time of depression this anarchic system just as planlessly withdrew the capital sums in order to bury them again in vaults in the form of paper notes or yellow metal (3)."

From its beginning the Conference had to take notice of the fact that order could be restored only through some form of planning Most countries, Professor Sering stated, more or less of necessity, and often without noticing it, came into the path of socialistic planning; most of them, in the fight against the economic crisis have groped their way from one emergency measure to another. But national planning schemes, in order to lose their character of emergency measures mostly destined to failure, must, according to Professor Sering, be brought into harmony with one another. This national harmonisation of economic measures to combat the crisis cannot fully attain its purpose unless parallel measures are taken in external trade, seeing that complete self-sufficiency is impossible. Hence the necessity of national planning with a view to international trade and co-operation. "I consider," Professor Sering said, "it to be one of the essential tasks of this Conference to awaken the consciousness of a common destiny and of international solidarity," and concluded thus "as men of science we will not limit ourselves to the examination of the value of the individual measures taken We will, considering the whole world and calmly pondering on all relevant facts, try to answer the question:

(1) The first Conference which took place in England in the summer of 1929, was of a preparatory character. The second assembled in 1930 at Ithaca, U. S. A., and it was there that the purposes of the meetings were fully defined and the Statute of the Association elaborated and approved.

(2) No paper on this particular type of farming was read.

(3) v. Proceedings of the International Conference of Agricultural Economists, pp. 23-39.

whither does the policy started during the crisis lead? Where are we to draw the boundaries of a public, planned economy, the boundaries for the socialisation and nationalisation of industry? The programme for this meeting has been drawn up by the Executive Committee in this sense. May it be of value to all peoples represented here and to humanity at large."

As outlined in the programme, Section I of the Proceedings dealing with national policies to combat the agricultural crisis, Dr. J. P. Maxton read a paper on measures taken in England, beginning with the Land Utilisation Act, dating back to 1931 and destined to provide employment for large numbers of unemployed. Also in 1931 the Agricultural Marketing Act was enacted which was described as "giving effect to the principle of compulsory co-operation in agriculture." The Horticultural Duties Act, the Import Duty Act and the Wheat Act followed in quick succession. But by far the most important attempt made by England to face the crisis was the Ottawa Agreements in August 1932. Mr Maxton is of the opinion that all these measures fell short of their intended purpose, namely to "build agriculture both for production and marketing on an economically efficient basis." He believes, however that the machinery which the marketing schemes and to a less extent the import regulations are establishing to-day cannot fail altogether and will remain at the basis of the present agricultural policy of Great Britain.

Switzerland has had her share of economic planning and control and agricultural co-operation, of which Professor Laur gave the Bad Eilsen assembly a careful outline. He also believes that there is no possibility of a return to individual action and that State control, however mild and limited, is necessary for the success of agricultural relief measures equal to the seriousness of the present crisis.

Professor von Dietze of the University of Berlin and Professor Tassinari of the University of Bologna reported on relief measures for combating the agricultural crisis in their respective countries In both cases government control is advocated as the surest means to combat present difficulties and insure the future welfare of both the State and the agriculturist. It seems then that deficient countries with intensive farming methods (Great Britain and Switzerland) and deficient countries approaching self-sufficiency (Germany and Italy) are agreed in a greater or lesser degree that the economic and agricultural crisis of the last five years has caused the adoption of measures by the Governments themselves and that Government control will not cease with a return to normal conditions. Such is also the opinion we find expressed in two of the most interesting papers read at the Bad Eilsen meeting by Professor S. L. Louwes and by Professor Otto von Franges, dealing respectively with the regulation of agricultural production in the Netherlands and with the fight against the crisis in the peasant countries of the Danube basin.

Canada and the U. S. A., the most perfectly mechanized countries in the world, have had and still have their problems to face to solve their agricultural crisis. As far as Canada is concerned, the chief measures taken by the Government to combat the worst features of the economic and agricultural depression were: (*a*) Price stabilisation; (*b*) bonuses on wheat growing; (*c*) imperial preferences in trade; (*d*) provisions of credit; (*e*) marketing legislation. Professor J. E. Lattimer, who dealt with the Canadian situation at Bad Eilsen, came to the conclusion that the most important relief measure was the imperial preference in trade. The Ottawa Trade agreement succeeded in improving the export outlets for some farm products. The other provisions have proved more limited in their effectiveness against agricultural trade depression.

A more cheerful outlook as regards State agricultural planning is to be found in the paper on the agricultural situation in the U. S. A., read by Dr. O. C. Stine of

the Bureau of Agricultural Economics It is undeniable that the measures adopted by the American Government during these last years to relieve the economic and particularly the agricultural crisis have met with marked success in more than one field.

Indeed one may say that, in spite of failures in some respects, the U. S. A relief measures have made some real progress on the road towards the recovery of normal conditions for agriculture and industry. In Dr. Stine's opinion national planning and re-adjustments which practically every nation has undertaken, cannot fail to pave the way for a resumption of international exchanges leading to "the recovery towards normal international trade in agricultural products." From the American view-point, the task of the U. S. A. as a producer for export has not been obliterated by the crisis and its consequences on international trade. Dr. Stine in fact believes that the importing countries will want American products again and suggests that America do her planning in such way as to adjust its production to their demand. In Section II of the Conference a report on the formation of new small holdings in Italy after the war was presented by Professor Lorenzoni

In absolute contrast with the opinion of the majority of the experts who attended the Bad Eilsen meeting, Professor Ashby of the University of Wales, maintained that the family farm system, which implies the notion of medium size and small holdings, implies also a tendency towards subsistence farming. The strictly economic side of the farming industry is thus lost sight of.

In spite of its social value, which Professor Ashby is ready to admit, the family farm system in his opinion is destined to fail in view of the modern tendencies of education, transport, and of general communication which promise the more rapid assimilation of the general standards of living of agriculturists to those of the national community Only a return to more primitive conditions of industry and life could save the family farm, and it is questionable, Professor Ashby argues, whether the cost of saving it would be justified anyway

On the basis of conditions prevailing in his country, P Borgedal, of the Agricultural College of Norway, seemed to incline towards the theory that medium size agricultural holdings best meet the requirements of an economically well organized farming unit. The social value of both farm and farm family is highly emphasized in the Norwegian expert's paper. A few remarks by Professor Warren of Cornell University sounded as a direct refutation of Professor Ashby's theories "The higher the education of the farmers, the greater the advantages of the family farm, the better developed the co-operative movement, the greater the advantage of the family farm; also the higher the wages in terms of farm products, the greater the advantage of the family farm," Professor Warren said, and he added that the capitalist farm, or estate system has a steadily growing disadvantage, or lessening of its advantages.

Two German experts, Professor Lang of the University of Konigsberg and Mr Schiller of the German Embassy at Moscow gave the Bad Eilsen gathering two enlightening accounts on the farming situation and farming problems in Soviet Russia. Professor Lang's paper was decidedly critical of the Russian collective and State system of farming which he found destructive of natural wealth, inefficient and lacking organising ability. Still he believes that the prodigious experiment which is being made for the reorganisation of Russian agriculture cannot be ignored.

Another contribution on the subject of collective farming came from Dr. A. Schürman, who pointed to the difference in the attitude towards collectivism of the Russian and the German peasants.

The population problem in its relation to agriculture was dealt with in Section III of the programme. What is the future of agriculture going to be if the present trend

in the growth of population continues? It cannot be denied that the problem of a waning population appears at present, both to economists and politicians, as rather serious and even alarming Professor Whelpton of Miami University, who with Dr. E O Baker of the Washington Bureau of Agricultural Economics contributed very important papers to Section III of the Bad Eilsen programme, discussed the population prospect in Great Britain, Germany, Italy, Denmark, France, Belgium and the U S. A His conclusions were that unless steps are taken to check the regress in the birth rate, the population of North-Western Europe and North America will begin rapidly to decline within twenty years The consequences of this decline on agriculture will be disastrous, according to Professor Whelpton, who suggests that two courses be followed, one dealing with goods and the other with people " Under the first a longtime programme will be developed for increasing the per capita purchasing power of the population, particularly of those large masses who are now little above a mere subsistence level, and for controlling production so that it will be in line with this demand Under the second the attempt will be to check the decline and even cause an increase in the birth-rate and the population growth by putting into effect economic measures to lighten the burden of child rearing on the family, and by endeavouring to change social attitudes so that individuals will be brought to feel more responsibility for the perpetuation of the race '

Dealing with the population problem more in detail as regards the U S A, Dr Baker could not arrive at a more encouraging conclusion than his colleague There has been a 20 per cent. decline in the birth-rate in America in the past decade The closing of the American continent to immigration and other factors have contributed to this decline which will continue unless the American people realise the serious situation which threatens them and show themselves willing to " adopt an altered philosophy of life ". in other words Dr Baker fully agrees with the conclusions of Professor Whelpton

The monetary situation was discussed in Section IV of the programme One of the most distressing aspects of the world economic condition was deemed by the experts who met at Bad Eilsen to be the disorder into which the monetary system has been thrown by the war and its aftermaths Naturally this disorder has heavily affected the field of agricultural economy In a carefully detailed paper Professor Warren of Cornell University showed how the price of basic commodities fell after the war as compared with pre-war conditions He expressed the opinion that currency instability is disastrous to modern society, and advocated a complete revision of the rules controlling the monetary system In his view private enterprise in this difficult field has entirely failed, and some form of control will have to be devised to restore a certain amount of order in world monetary matters.

Professor Schumacher of the University of Berlin, who spoke on the currency problems of our time, appeared to be more hopeful of a restoration of order out of monetary chaos

It is beyond the limit of this review to go into a detailed account of the paper read by the President of the Reichsbank, Hjalmar Schacht, in whose opinion a complete revision of the peace treaties and of the general application of their clauses is essential for the economic recovery of the world. The number of graphs and tables which illustrate Dr Schacht's contribution to the work of the meeting are an impressive documentation of the world economic situation in the midst of an unparalleled crisis, of which Dr. Schacht cannot see a solution unless equality of rights and duties is re-established between the two groups of nations that fought as enemies in the great war.

The failure of gold to maintain its stability in the present crisis was illustrated at length by the Dutch expert M. D. Dijt. In his opinion the world economic system

has been upset by over-production and deflation at the same time. The remedy lies in a system by which " the agrarian staple products, such as wheat, sugar, cotton, coffee and rubber, produced in excess from time to time, would be used to increase the money circulation, in much the same way as the enormous gold over-production is used to-day for increasing the money in circulation. " The question of international debts and their influence on agricultural prices was treated by Mr. R. R. Enfield, of the English Ministry of Agriculture. Mr. Enfield emphasized the fact that a decline in demand resulting from deflation which in its turn was accelerated by the situation of debtor countries and the restriction of trade whereby these countries attempted to maintain the balance of payments, was responsible for the fall and the persistent low level of agricultural prices.

It remains now to draw some conclusions from the great mass of material which the Bad Eilsen experts had assembled and discussed. The outstanding feature of the work of the meeting was the unanimity of the opinion that the world is suffering from a crisis which only international action and international co-operation can meet and hope gradually to solve. Trade agreements between nations, as illustrated in Mr. Winter's paper on the new tendencies in international trade policies, regional pacts such as those concluded by the bloc of the Little Entente (Yugoslavia, Rumania and Czechoslovakia), the Ottawa agreements, the agreement of Italy with Austria and Hungary and several other similar ones, as well as the adoption of international schemes for the regulation of supply as discussed by Mr. E. M. H. Lloyd of the London Market Supply Committee, brought into relief the fact that the need for international action is universally felt and is universally deemed to be the only remedy against the worst crisis the world has ever known. In the words of Dr Henry C. Taylor no historical precedents can be used as models for the future plans for international trade Government planning as a corrective of individual action should, in Dr. Taylor's opinion, avoid the danger of overreaching its goal There is a tendency, particularly in Europe, to make each country self-sufficient Nationalism intelligently promoted, Dr. Taylor said, does not imply autarchy. It is quite possible to promote international trade without renouncing to a rational economic policy wisely tempered by the spirit of nationalism. Trade barriers cannot be battered down without government action, and the flow of international trade cannot be restored without specific international agreements. But government action in this field must rest on a sound economic basis, which takes into account actual facts. Economists must indicate a clear and comprehensive fact-basis of international planning. It is not an easy task, but it must be undertaken and carried out

Those who are in control of the national policies of the different countries and know the art of dealing with international entanglements will attend to the necessary negotiations. But the light must come to them from the economists. It must be said that in that respect the Bad Eilsen meeting did not fail in its purpose.

V. F.

Practical conditions for successful instruction in household management and farming by P. De Vuyst, Honorary Director General of Agriculture at Brussels.

(1) *Aims and objects.* — The object of instruction in farm household management is to train young girls to be women farmers, that is, to render them capable of collaborating in the work and management of the farm. At the same time it includes the training of young girls in the work necessary for keeping their homes in good order and in the care and up-bringing of their children.

Instruction in household management of a general character, or combined with vocational instruction other than agricultural, should also approach the ordinary conditions of life of the category of pupils for whom it is intended. It is advisable to give preference to vocations which may be followed in the home. All housewives should have the theoretical and practical knowledge necessary to be able to grow certain flowers, vegetable and fruits, as every housewife should have her plot of ground.

(2) *Suitable environment.* — Environment has a considerable influence on the formation of habits. How is it possible to develop rural customs in an urban environment ?

The mentality and example of the teaching staff is of importance in this respect. As, on the farm, children live and act according to the example given by their parents the agricultural school of housekeeping should exercise the same influence.

The premises also should be adapted to the object in view. All the arts, for agriculture is an art, are more easily learnt in the workshop of the master than in artificial and abnormal conditions.

It follows that the furnishings of such a school should be simple and in good taste and should in no way resemble the vulgar and pretentious furnishings which have recently invaded country districts. The Committee for Beautifying Rural Life has for some time protested against this pernicious tendency. It is easily understandable that undesirable results may be arrived at by a school that thus perverts the æsthetic and rural senses of the pupils. The farm and the home are the workshops of the woman farmer who cannot be trained under conditions which differ too greatly from those under which she will work in the future.

Relations outside the school, both with regard to teachers and pupils, should be as rural as possible Participation in all rural work and in all forms of farming and domestic work is more effective in giving instruction in housekeeping than any other activity which is not favourable to the development of the agricultural mentality.

In all cases environment has a great educational influence and it is important to make sure that this environment, as far as possible, corresponds to that of the farm, the home and the family.

(3) *Practical arrangement of premises and work.* — It is indisputable that to arrive at an atmosphere of family life pupils should live together with their teachers in small groups, as in a family, in separate and, if possible, independent accommodation, rural in style and simply furnished in good taste, so as to familiarise them with the life and work on a farm.

These lodgings should be of different types corresponding to the different stages of progress in the capacity of the pupils and the work to be carried out, that is, in the standard of instruction in farming, housekeeping and the care of a family.

The Committee for Beautifying Rural Life has shown, in many exhibitions, numerous examples of practical farm accommodation which has had an excellent effect on rural construction in the country

This Committee has frequently taken part in the organisation of the Institute of Farm Household Management at Laeken and has established a demonstration farm which clearly shows the progress that has been made. The arrangement of the buildings, in order to facilitate work and supervision, is extremely well planned, there is considerable use of electrical power in the work of the farm and for domestic purposes and the utilisation of each building to the maximum and the multiple uses of furnishings, so as to save space, all contribute towards the work of practical arrangement.

The National Centre of Studies on Household Management, for the improvement of household management throughout the country, contains a technical and scientific section, a teaching section and a social section which are devoted to studying the work that every school of house-keeping should carry out in order to arrive at the most advantageous results with a view to progress in instruction

(4) *Programmes of study.* — The programme of theoretical and practical instruction should evidently include the principal scientific and technical knowledge necessary for a woman in her work on the farm and in the home, also for the up-bringing for her children. It is sufficient to question old pupils who have become farmers, housewives and mothers to obtain an idea of the balance that should be maintained between education and practical work.

It has been said that the programme is overloaded with general subjects This should be avoided as it restricts the vocational development that is in view.

It is not so much the quantity of knowledge that should be obtained as the quality. Instruction should be directed, above all, towards developing judgement and the spirit of observation and experimentation. If necessary, preference should always be given to the practical work of the school· the activities connected with farming, housekeeping and instruction should be essentially practical

For this reason the programme should be one of *practical application* and *organisation* as it is necessary to *educate* and *develop habits* which can only be attained by the repeated application of practical work The habit of acting and putting into practice should become second nature

The programme of subjects should be chiefly a guide to the knowledge that should be acquired. The programme of practical work is a guide to application, that is, to organisation, collaboration, practical work and the responsibilities to be assumed.

(5) *Methods.* — It should be realised that there is an infinity of methods, techniques and systems—that certain persons succeed with certain methods and others with different systems These methods are always capable of improvement The best methods known today give the best results, but tomorrow better results will be obtained with improved methods.

The development of personal work in vocational, domestic and moral training should be constantly kept in view.

The proof of personal capacity is most easily obtained by a thesis presented with the final examination.

The system of marking should be arranged in such a way as to estimate all the activities of pupils during the course of the year and as little as possible should be left to the test of the examinations at the end of the year

This complexity of objectives and desiderata will be well balanced by the Teachers' Council if the objects in view are not lost sight of. Care should be taken to curtail all accessory and secondary considerations and to concentrate on the principal objective. The great danger is that the essential will be overwhelmed by the secondary and superflous. That which is artificial and out of the ordinary should disappear before the ordinary.

Among the conditions most suitable for successful instruction in housekeeping, the following may be recommended:

(a) *An ordinary family environment:* in accommodation, arrangement, good taste and the practical utilisation of space, also furnishing, chiefly with regard to the pupils' own rooms, etc.

(b) *A rural and homely mentality* of the teaching staff (practical instruction of a family nature).

(c) *Programme of work* for the teachers and for the pupils. Co-ordination of all initiative and activity for putting into practice the programme of work. Periodical determination of progress made. Improvement in the quality of theoretical work; diminution in quantity. Increase in practical work.

(d) *Practical methods*. Ordinary management of the farm and the home. Practical arrangement of work. Application of methods to ordinary conditions. Model demonstrations followed by application in small groups, the mistress working with the pupils as a mother would work with her daughters.

(e) *Development in the personal work of the masters, mistresses and pupils* and the documentation of that work according to a minimum of indispensable scientific and pedagogic principles

(f) *Maximum development of the sense of responsibility* and devotion in the teaching staff and the pupils Practical distribution of charges entrusted to pupils with a view to collaboration in carrying out the programme of work and their mutual improvement as much from the point of view of character as from the vocational standpoint

(g) *Practical distribution of studies and practical work* Practical distribution of tests and marks according to their relative importance so as to avoid overworking the pupils and to arrive at the vocational, moral and domestic objectives that are in view

PUBLICATIONS RECEIVED BY THE LIBRARY

Books.

Bibliography

FIRENZE. BIBLIOTECA NAZIONALE CENTRALE. Elenco delle riviste esposte nella sala dei periodici della Biblioteca nazionale centrale di Firenze Firenze, 1935. 92 p.

FÜSSER, G. Bauernzeitungen in Bayern und Thüringen von 1818-1848. Ein Beitrag zur Geschichte des deutschen Bauernstandes und der deutschen Presse Hildburghausen, Thuringer Tageszeitung, 1934. XV, 187 p (Zeitung und Leben hrsg von Karl d'Ester. Bd. 8).

MANLEY, M. C. Business directories. A key to their use Newark, Public library, 1934. 63 p.

Rural Economics.

DAVIS, J. S. Wheat and the AAA. [Agricultural adjustment act]. Washington, Brookings institution, 1935. XVII, 468 p. (Institute of economics, Washington, Publication nº 61).

FUNK, A. und E. ZEDWITZ. Die Organisationen der deutschen Land- und Forstwirtschaft in der Tschekoslowakischen Republik. 2. neubearb. und erweiterte Aufl. Prag, Verlag der Geschäftsstelle der deutschen Land- und Forstwirtschaft, 1935. 352 p. (Schriften für das deutsche Landvolk).

GOLDSTEIN, J. M. The agricultural crisis is it a temporary problem ? New York, J. Day Cº, [1935]. XI, 257 p.

LO BIANCO, A. La pratica della perizia e dell'arbitrato. 4ª ed. completamente rifatta. Milano, U. Hoepli, 1935. XII, 418 p. (Manuali Hoepli).

MARTIN, F. Principes d'agriculture et d'économie rurale appliqués aux pays tropicaux [Paris, Impr. des orphelins-apprentis d'Anteuil, 1935], 341 p.

ROWE, H. B. Tobacco under the AAA. [Agricultural adjustment act] Washington, Brookings institution, 1935. XIII, 317 p. (Institute od economics, Washington. Publication nº 62).

SERPIERI, A., N. MAZZOCCHI ALEMANNI. Lo Stato fascista e i rurali. Milano, Mondadori, 1935. 149 p. (Panorami di vita fascista. Collana edita sotto gli auspici del P. N. F., v. 19).

WOERMANN, E. Standort, Betriebsformen und Ausdehnungsmöglichkeiten der deutschen Schafhaltung. Berlin, P. Parey, 1935. 90 p. (Berichte über Landwirtschaft. 111. Sonderheft).

Co-operation.

CO-OPERATIVE UNION LTD., MANCHESTER. 67th Annual co-operative congress 1935. held at Cardiff, June 10th-12th, 1935. Manchester, [Co-operative Printing Society] 1935. 726 p.

RACHÂD, IBRAHÎM. Kitâb et ta'âouon ez zirâ'i. 2e éd. Le Caire, Impr. nationale, 1935. 2 v. (Ouizârat el ma'âref el oumoumiya).
[The Book of the Agricultural co-operation].

Credit.

AMERICAN INSTITUTE OF BANKING, NEW YORK. Farm credit administration. New York, [1934]. 478 p.

NIKOSAVIĆ, B. Die Agrarverfassung und der landwirtschaftliche Kredit Jugoslawiens. Berlin, Parey, 1935. 88 p. (Berichte über Landwirtschaft. 112. Sonderheft).

Financial Questions.

MOULTON, G. The formation of capital. Washington, Brookings institution, 1935. XI, 207 p (Brookings institution. Institute of economics. Publication nº 59).

Trade.

[UNITED STATES] Tariff commission. A graphic analysis of the international trade of the United States in 1932. Washington, Govt. printing office, 1934, IV, 123 p. (Miscellaneous series).

Legislation.

DONATI, R. Fondazione della scienza del diritto. Parte prima di una « introduzione alla scienza del diritto ». Padova, « Cedam », 1929. XI, 274 p.

FEROCI, V. Istituzioni di diritto pubblico secondo la vigente legislazione fascista. (Costituzionale, amministrativo, sindacale e corporativo), 2. a. ed. aumentata ed aggiornata. Milano, U. Hoepli, 1936. XV, 432 p.

MITZSCHKE, G. und K. SCHAFER. Das Reichsjagdgesetz vom 3. Juli 1934. Textausgabe mit Einleitung hrsg. unter Benutzung amtlichen Materials. 2. Aufl. Berlin, Parey, 1935. 160 p.

Industries.

Delaporte, R. Comptabilité appliquée à l'industrie. Le prix de revient. Paris, Société française d'éditions littéraires et techniques, [1934]. 215 p. (Encyclopédie Roret).

Hubbard, G. E. Eastern industrialization and its effect on the West, with special reference to Great Britain and Japan. London, Oxford university press, 1935. XXII, 395 p.

Indicateur de la production française, 1935. 18ème année de publication. Paris, Association nationale d'expansion économique, [1935]. 543 p.

Various.

Marescalchi, G. Eritrea. Milano, Bietti, [1935]. 206 p.

Mazzucconi, R. Guida allo scrivere corretto. [2. a. ed. riveduta e accresciuta]. Milano, « Le lingue estere », [1935]. 123 p. (Quaderni di cultura linguistica, 1.)

Oberhessische Gesellschaft für Natur- und Heilkunde, Giessen. Bericht. Neue Folge. Naturwissenschaftliche Abteilung. Band 16. (1933-35). Giessen, Töpelmann, 1935. 201 p.

Steers, J. A. An introduction to the study of map projections. 3rd ed. revised and enlarged. London, University of London press, 1933. XXIII, 227 p.

Virgilii, F. Le Colonie italiane nella storia, nella vita presente e nel loro avvenire, 2a ed., riveduta e aggiornata. Milano, Hoepli, 1935. X, 254 p. (Manuali Hoepli).

Periodicals (1), (2), (3).

Activité économique. v. 1, 1935. trim. Paris. 100 fr. int.; 120 fr. étr. (Institut de statistique de l'Université de Paris et Institut scientifique de recherches économiques et sociales).

Afrika Rundschau. v. 1, 1935, mens. Hamburg. RM. 12. Hanseatische Verlagsanstalt.

Agrôtikê oikonomia. 1935. trim. Athènes. drs. 100 int.; drs. 150 étr. [Rural economy].

Archivio « Vittorio Scialoja » per le consuetudini giuridiche agrarie e le tradizioni popolari italiane. v. 1, 1934. sem. Firenze, L. 25 int. L. 50 étr.

Boletín de comercio, n. 43, 1935. mens. Bogotà. (Ministerio de agricultura y comercio).

Boletin de hacienda. v. 22, 1935. mens. Montevideo. (Contaduria general de la nación). [Formerly: « Boletín del Ministerio de hacienda »].

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(1) Previous list September 1935. To be continued March 1936.

(2) List of abbreviations: bihebd (biweekly): bimens. (twice monthly); bimestr. (every two months); déc. (every ten days); étr. (foreign price); f. (copy): hebd. (weekly); int. (home price); irr. (irregular): mens. (monthly); n? (number); N. S. (new series); p. a. (per annum); q. (daily); sem. (half yearly); s. (series): trihebd. (every three weeks); v. (volume); trim. (quarterly).

(3) Between brackets [/] are given translations and explanatory notes not appearing in the title of the review.

BOLLETTINO ufficiale del Governo della Libia. v. 22, 1935. bimens. Tripoli. L. 50 p. a. (Economato del Governo). [Incorporating: « Boll. uff. del Governo della Tripolitania » and « Boll. uff. del Governo della Cirenaica ».]

BRITISH Chamber of commerce of São Paulo & Southern Brazil. *Fortnightly information sheets.* 1935, São Paulo.

BUTLETÍ mensual d'estadística. v. 1, 1934. Barcelona. 20 ptes. (Servei central d'estadística de Catalunya).

CANADIAN journal of economics and political science. v. 1, 1935. trim. Toronto, Ont. $ 3 (Canadian political science association).

CONSULENTE legale dell'agricoltore. v. 3. 1934. mens. Roma. L. 40.

CRONICA economica internationale. v. 1, 1935. mens. Bucureşti. L. 800. (Banca natională a României. Serviciul de studii). [International economic news. National bank of Rumania. Research service].

CRONIQUE coloniale. v. 15. n. s. 1935, bimens. Paris, 25 fr. int.; 50 fr. étr. (Institut colonial français).

DAIRY herd-improvement association letter. v. 11, 1935. mens. Washington (Bureau of dairy industry. U. S. Department of agriculture).

EAST AFRICAN agricultural journal. v. 1, 1934. bimestr. Amani, Tanganyika Territory, 5s. p. a.

ECONOMIC survey. 1934. bimestr. Moskva $ 2. (USSR Chamber of commerce). [Formerly. « Quarterly review »].

EMPIRE producer. n. 224, 1935. mens. London. 1s. le n. (British Empire producers' organisation). [Formerly « Empire production and export »].

FEUILLE officielle de la République et canton de Neuchâtel. v 99, 1932, bihebd. Neuchâtel. Fr. 10 int.; port e sus étr.

GACETA oficial de los Estados Unidos de Venezuela. v. 62, 1934. q Caracas B 48, p. a. (Imprenta nacional).

HABANO. Revista tabacalera. v. 1, 1935. mens. Habana $ 3 int., $ 4 U. S A. Mexique et Espagne; $ 5 autres pays.

HARVARD university. Graduate school of business administration. *Business research studies.* 1933. irr. Bostoń, Mass. prix var. par fasc. (Bureau of business research).

IBERO-amerikanische Rundschau. v. 1, 1935. mens. Hamburg RM. 12. Hanseatische Verlagsanstalt.

INDEX agraire et agricole. (Articles de revues). 1931 6 f. p. an. Moskva. prix var par fasc. (Association de la bibliographie agricole de l'U. R S. S.) [Formerly « Index bibliographique de la question agraire », published by « Institut agraire international »].

INDIAN co-operative review. v. 1, 1935 trim. Mylapore, Madras. Rs. 6 int.; Sh. 10/-étr.

IRISH textile journal. A monthly supplement to « The linen trade circular ». v 1, n. s., 1935. Belfast, 10s. p. a.

JAHRBUCH der Gesellschaft für Geschichte und Literatur der Landwirtschaft. (Neue Folge der Landwirtschaftlich-Historischen Blätter). v. 23, 1934. trim. Göttingen. (Institut für Landwirtschaftliche Bretriebs- und Landarbeitslehre an der Universität Göttingen).

JUGOSLOVENSKA bibliografija. Bibliographie yougoslave. v. 1, 1934, mens. Beograd. Din. 80. int. Fr. s. 15. étr. (Savez knjižarskikh organizacija Kraljevine Jugoslavije. Union des associations des libraires du Royaume de Yougoslavie).

JUNTA nacional de carnes. Compras de ganado bovino, ovino y porcino efectuadas por los frigoríficos en las estancias, 1935. hebd. Buenos Aires.

JUNTA nacional de carnes. Movimiento y cotizaciones del ganado y las carnes en los principales mercados del país y del extranjero. 1935. hebd. Buenos Aires.

LABOR information bulletin. v. 2, 1935. mens. Washington. (Bureau of labor statistics. U. S. Department of labor).

LAUKSAIMNIECIBAS tirgus zinas. (Lettische landwirtschaftliche Marktzeitung). v. 7. 1935. hebd. Riga. Ls. 2, (Latvijas lauksaimniecibas kamera). [Lettische, landwirtschft liche Kammer]. [Titles of review and of tables also in German].

MAJANDUSTEATED. Weekly bulletin of the Institute of economic research. n. 1, 1935. hebd. Tallinn. Kr. 5 p. a.; avec « Konjunktuur » Kr. 12.

MANCHOUKUO. Bureau of information and publicity. Department of foreign affairs. *Bulletin*. v. 1, 1933. irr. Hsinking.

MARKTBERICHT des Reichsnährstandes. - Ausgabe *A* Brotgetreide und Mehl. - Ausgabe *B*. Industriegetreide und Futtermittel. - Ausgabe *C*. Kartoffeln. - Ausgabe *D*. Obst und Gemuse. - Ausgabe *E*. Fische. - Ausgabe *F*. Eier, Geflugel und Honig. - Ausgabe *G*. Milch und Molkereierzeugnisse. - Ausgabe *H*. Vieh und Fleisch. Novembre 1935 hebd. Berlin. (Marktberichtstelle beim Reichsnährstand).

MESURES gouvernementales affectant les prix des produits agricoles. Recueil international trimestriel des mesures gouvernementales affectant les prix des céréales, des viandes et des produits laitiers, v. 1, 1935 trim. Rome Lit. 25. (Institut international d'agriculture).

MOÇAMBIQUE. Documentário trimestral. v. 1, 1935. Lourenço Marques. 60$00 p. a. (Repartição de Estatística).

MONHTLY returns of the foreign trade of Manchoukuo, n. 25, 1935. Hsinking. (Department of finance).

NOTICIERO mercantil. v. 1, 1935. q. Habana. $ 12 int.; $ 14 ou 16 étr.

PROBLEMI siciliani, v. 10, 1933. mens. Palermo. L. 20 int., L. 40 étr.

PRZEMYSL rolny. v. 1, 1935. mens. Warszawa. Zl 6. (Museum przemyslu i rolnictwa w Warszawie). [Agricultural industry].

REPORT of the Kansas state board of agriculture. v. 46, 1927. trim. Topeka.

RES. Revista ilustrada de las carnes argentinas. v. 1, 1933. bimens. Buenos Aires. $ 7 int.; $ 4 o $ étr.

REVUE du livre et des bibliothèques. v. 3, 1935, mens. Paris. 25 fr. int.; 35 fr. étr.

RICE, sugar and coffee journal. v. 38, 1935. mens. New Orleans, La. $ 2,00 int., $ 3.00 étr.; avec « Weekly market service » $ 5,00 int.; $ 6,00 étr. [Formerly « The rice journal »].

GOVERNMENT measures affecting agricultural prices. An international quarterly summary of government measures affecting the prices of cereals, meats and dairy products, v. 1, 1935. trim. Rome. Lit. 25. (International institute of agriculture).

TROUDOVE na statisticheskiia institout za stopanski proutchvaniia. Publications of the statistical institute for economic research. n. 1, 1935. environ 4 f. p. a. Sofia. (Universitet. State University).

ULSTER farmer. v. 26, 1935, mens. Belfast. 3s. int.; $ 1 U. S. A.

VERTEILUNG der Niederschläge in Deutschland. 1935. mens. Berlin. (Reichsamt fur Wetterdienst).

WOCHENBERICHT über Nahrungsmittelpreise in der Schweiz. 1935. Bern. (Eidgenössisches Volkswirtschaftsdepartement. Preiskontrolle). (Edition in 3 languages: German, French and Italian]. [Formerly « Marktberichtheft »].

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